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# AIR POLLUTION

## HEARINGS

BEFORE A

### SUBCOMMITTEE OF THE COMMITTEE ON

### INTERSTATE AND FOREIGN COMMERCE

### HOUSE OF REPRESENTATIVES

EIGHTY-SEVENTH CONGRESS

SECOND SESSION

ON

#### H.R. 747

A BILL TO EXTEND THE DURATION OF THE FEDERAL AIR POLLUTION CONTROL LAW, AND FOR OTHER PURPOSES

#### H.R. 1189

A BILL TO PROVIDE THAT THE SECRETARY OF COMMERCE SHALL FURNISH WEATHER REPORTS TO CERTAIN AIR POLLUTION CONTROL AGENCIES

#### H.R. 2948, H.R. 3577, H.R. 9352

BILLS TO PROVIDE FOR PUBLIC HEARINGS ON AIR POLLUTION PROBLEMS OF MORE THAN LOCAL SIGNIFICANCE UNDER, AND EXTEND THE DURATION OF, THE FEDERAL AIR POLLUTION CONTROL LAW, AND FOR OTHER PURPOSES

#### H.R. 3083

A BILL TO AMEND THE ACT OF JULY 14, 1955, RELATING TO AIR POLLUTION CONTROL, SO AS TO AUTHORIZE THE APPROPRIATION OF SUCH SUMS AS MAY BE NECESSARY TO CARRY OUT ITS PROVISIONS, WITHOUT LIMITATION AS TO FISCAL YEARS

#### H.R. 9347

A BILL TO AMEND THE FEDERAL AIR POLLUTION CONTROL LAW TO PROVIDE FOR A MORE EFFECTIVE PROGRAM OF AIR POLLUTION CONTROL, AND FOR OTHER PURPOSES

#### H.R. 10519, H.R. 10615, H.R. 11524

BILLS TO EXTEND AND STRENGTHEN THE FEDERAL AIR POLLUTION CONTROL PROGRAM

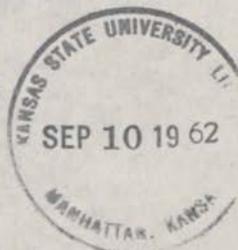
#### S. 455

AN ACT TO PROVIDE FOR PUBLIC HEARINGS ON AIR POLLUTION PROBLEMS OF MORE THAN LOCAL SIGNIFICANCE UNDER, AND EXTEND THE DURATION OF, THE FEDERAL AIR POLLUTION CONTROL LAW, AND FOR OTHER PURPOSES

JUNE 25, 1962—WASHINGTON, D.C.  
NOVEMBER 27, 1961—BIRMINGHAM, ALA.

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II



## CONTENTS

	Page
Hearings held on—	
June 25, 1962, Washington, D.C.-----	1
November 27, 1961, Birmingham, Ala.-----	31
Text of—	
H.R. 747-----	1
H.R. 1189-----	2
H.R. 2948-----	2
H.R. 3083-----	3
H.R. 3577-----	2
H.R. 9347-----	3
H.R. 9352-----	2
H.R. 10519-----	5
H.R. 10615-----	5
H.R. 11524-----	5
S. 455-----	9
Report of—	
Agriculture Department of-----	9
Army, Department of the-----	10
Budget Bureau-----	11
Commerce, Secretary of-----	11
Comptroller General-----	12
Federal Aviation Agency-----	14
Health, Education, and Welfare, Department of-----	14
Interior, Department of-----	14
Labor, Department of-----	15
Statement of—	
Branscomb, Dr. Ben V., assistant professor, University of Alabama School of Medicine-----	61
Corman, Hon. James C., a Representative in Congress from the State of California-----	20
Denison, Dr. George A., health officer, Jefferson County Board of Health-----	68
Fogarty, Hon. John E., a Representative in Congress from the State of Rhode Island-----	21
Gallalee, Dr. John M., chairman, Advisory Committee on Air Pollu- tion, Jefferson County Board of Health-----	60
Grimley, K. W., executive secretary, Alabama Tuberculosis Associa- tion-----	75
Halpern, Hon. Seymour, a Representative in Congress from the State of New York-----	25
Huddleston, Hon. George, Jr., a Representative in Congress from the State of Alabama-----	36
McDonough, Hon. Gordon L., a Representative in Congress from the State of California-----	22
Prindle, Dr. Richard A., Deputy Chief, Division of Air Pollution, U.S. Public Health Service-----	36
Reid, Ed E., executive director, Alabama League of Municipalities--	70
Schueneman, Jean J., Chief of the Technical Assistance Branch, Divi- sion of Air Pollution, Public Health Service-----	42
Spurlock, Mrs. Hugh, third district, Federated Women's Clubs-----	75
Sweeney, Dr. Donald B., chairman, Jefferson County Board of Health-----	68

Additional information submitted to the committee—	
Gallalee, Dr. John M., list submitted of members of the advisory committee on air pollution.....	Page 61
Health, Education, and Welfare, estimate of additional cost, 1963-67, attachment to letter to the Speaker, House of Representatives.....	19
Schueneman, Jean J., table re seasonal levels of suspended particulate matter at certain selected cities in the national air sampling network.....	59
Status of Federal air pollution control program.....	35
Communications submitted to the committee—	
Anderson, Paul J., chairman, Southern California Air Pollution Coordinating Council, telegram dated June 24, 1962.....	24
Bird, David W., president, National Association of County Officials, telegram dated June 25, 1962.....	24
Health, Education, and Welfare, Speaker, House of Representatives, dated February 27, 1962.....	15
Phillips, William J., air pollution chairman, National Association of County Officials, telegram dated June 22, 1962.....	24
Wagner, Hon. Robert F., mayor, city of New York, letter dated June 20, 1962.....	24

# AIR POLLUTION

MONDAY, JUNE 25, 1962

HOUSE OF REPRESENTATIVES,  
SUBCOMMITTEE ON HEALTH AND SAFETY OF THE  
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,  
Washington, D.C.

The subcommittee met, pursuant to call, at 10:15 a.m., in room 1334, New House Office Building, Hon. Kenneth A. Roberts (chairman of the subcommittee) presiding.

Mr. ROBERTS. The subcommittee will please be in order.

The subcommittee is meeting this morning to continue hearings on air pollution control legislation. The Chair has introduced two bills on the subject. One of these, H.R. 3083, would make the present temporary legislation permanent and remove the \$5 million ceiling on annual appropriations. The other bill, H.R. 10519, proposing an extensive revision of the present law, was introduced at the request of the Public Health Service. We also have a Senate bill, S. 455, before the subcommittee.

Several of our colleagues have introduced bills on air pollution and we are meeting this morning to hear testimony from the authors of these bills and other Members of Congress who are concerned about this important problem.

If there is no objection, copies of the various bills, together with agency reports, will be inserted in the hearing record at this point, along with a letter to the Speaker, from the Honorable Abraham Ribicoff, Secretary of the Department of Health, Education, and Welfare, transmitting the text of the bill I introduced.

(The documents referred to are as follows:)

[H.R. 747, 87th Cong., 1st sess.]

A BILL To extend the duration of the Federal air pollution control law, and for other purposes

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That section 5 of the Act of July 14, 1955 (42 U.S.C. 1857(d)), is amended—

- (1) by striking out "(a)" after "SEC. 5.",
- (2) by striking out "for each of the five fiscal years during the period beginning July 1, 1955, and ending June 30, 1960, not to exceed \$5,000,000" in the first sentence and inserting in lieu thereof "for each fiscal year such sum as may be necessary",
- (3) by inserting "for surveys and studies and" before "for research" in clauses (1) and (2) of such first sentence, and
- (4) by striking out ", and shall be allotted by the Surgeon General in accordance with regulations prescribed by the Secretary of Health, Education, and Welfare" in the last sentence.

SEC. 2. Such Act is further amended by adding at the end thereof the following new section:

"SEC. 8. It is hereby declared to be the intent of the Congress that any Federal department or agency having jurisdiction over any building, installation, or other property shall, to the extent practicable and consistent with the interests of the

United States and within any available appropriations, cooperate with the Department of Health, Education, and Welfare, and with any interstate agency or any State or local government air pollution control agency in preventing or controlling the pollution of the air in any area insofar as the discharge of any matter from or by such property may cause or contribute to pollution of the air in such area."

[H.R. 1189, 87th Cong., 2d sess.]

A BILL To provide that the Secretary of Commerce shall furnish weather reports to certain air pollution control agencies

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That the last sentence of the first section of the Act entitled "An Act to provide research and technical assistance relating to air pollution control", approved July 14, 1955 (42 U.S.C. 1857), is amended by striking out the last sentence and inserting in lieu thereof the following: "To this end, the Secretary of Health, Education, and Welfare, the Surgeon General of the Public Health Service (under the supervision and direction of the Secretary of Health, Education, and Welfare), and the Secretary of Commerce, shall have the authority relating to air pollution control vested in them by this Act."

SEC. 2. Such Act of July 14, 1955, is further amended by redesignating sections 6 and 7 as sections 7 and 8, respectively, and by inserting immediately after section 5 the following new section:

"Sec. 6. Upon the request of any State or local government air pollution control agency, the Secretary of Commerce shall—

"(1) make such observations, measurements, investigations, and studies of atmospheric phenomena, and establish such meteorological offices and stations, as are necessary or best suited for ascertaining, in advance, information concerning the effect of probable weather conditions on air pollution; and

"(2) furnish such reports, forecasts, warnings, and advice, with respect to the effect of probable weather conditions on air pollution, in such manner and with such frequency as will best enable such State or local air pollution control agency to control air pollution and provide assistance for technical research in devising and developing methods of abating such pollution."

[H.R. 2948, H.R. 3577, H.R. 9352, 87th Cong., 1st sess.]

A BILL To provide for public hearings on air pollution problems of more than local significance under, and extend the duration of, the Federal air pollution control law, and for other purposes

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That section 3 of the Act of July 14, 1955 (42 U.S.C. 1857b), is amended by striking out "upon request of any State or local government air pollution control agency," by striking out "such State or local government air pollution control agency" and inserting in lieu thereof "any State or local government air pollution control agency", and by inserting before the period at the end thereof "but only if requested to do so by such State or local government air pollution control agency or if, in his judgment, such problem may affect or be of concern to communities in various parts of the Nation or may affect any community or communities in a State other than that in which the matter causing or contributing to the pollution originated".

SEC. 2. Such Act is further amended by redesignating sections 6, 7, and 8 as sections 7, 8, and 9, respectively, and inserting after section 5 the following new section:

"Sec. 6. (a) Whenever, on the basis of reports, surveys, or studies, he believes it appropriate, or whenever requested by any State or local government air pollution control agency, the Surgeon General may call a public hearing on any problem of air pollution which may affect or be of concern to communities in various parts of the Nation or which may affect any community or communities in any State other than the State in which the matter causing or contributing to the pollution originates. Any such hearing shall be conducted before a board composed of not less than five members appointed by the Secretary of Health, Education, and Welfare, who shall be representative of the public industry which is affected by or concerned with the problem, persons who are expert or have special knowledge in the matter, interested Federal agencies, and interested State or local government air pollution control agencies.

"(b) Subject to regulations of the Surgeon General, an opportunity to be heard at such hearing shall be accorded to all interested persons.

"(c) After consideration of the information presented at the hearing and such other information as is available to it, the board shall make a report and recommendations to the Surgeon General on such matters as the existence, cause, and effect of the air pollution on which the hearing was held, progress toward its abatement, and other related matters. Such report and recommendations, together with the comments and recommendations, if any, of the Surgeon General with respect thereto, shall be available to the community or communities, Government agencies, and industries concerned and, to the extent the Surgeon General deems appropriate, to the public, but shall not be binding on any person, agency, or organization."

SEC. 3. Section 5 of such Act (42 U.S.C. 1857d) is amended by striking out "nine fiscal years beginning July 1, 1955, and ending June 30, 1964, not to exceed \$5,000,000" in the first sentence, and inserting in lieu thereof "eleven fiscal years beginning July 1, 1955, and ending June 30, 1966, not to exceed \$5,000,000".

[H.R. 3083, 87th Cong., 1st sess.]

A BILL To amend the Act of July 14, 1955, relating to air pollution control, so as to authorize the appropriation of such sums as may be necessary to carry out its provisions, without limitation as to fiscal years

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That section 5 of the Act of July 14, 1955, entitled "An Act to provide research and technical assistance relating to air pollution control" (42 U.S.C. 1857d), is amended by striking out "for each of the nine fiscal years during the period beginning July 1, 1955, and ending June 30, 1964, not to exceed \$5,000,000" in the first sentence and inserting in lieu thereof "such sums as may be necessary".

[H.R. 9347, 87th Cong., 1st sess.]

A BILL To amend the Federal air pollution control law to provide for a more effective program of air pollution control, and for other purposes

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That section 3 of the Act entitled "An Act to provide research and technical assistance relating to air pollution control," approved July 14, 1955 (42 U.S.C. 1857b), is amended to read as follows:

"Sec. 3. (a) The Surgeon General may conduct investigations and research and make surveys (including holding public hearings) concerning any problem of air pollution confronting a State or local government air pollution control agency or of concern to the Nation or any area thereof with a view to recommending a solution to such problem.

"(b) (1) The Surgeon General shall, after conducting such research as may be necessary, determine standards as to the amount of unburned hydrocarbons, noxious gases and other pollutants, which are safe from the standpoint of human health, for discharge into the atmosphere.

"(2) After the determination of such standards the Surgeon General shall use his authority under the provisions of this Act to the extent necessary to develop effective and practical devices to control the discharge of pollutants into the air within the limits of such standards.

"(3) The Surgeon General shall report annually to the President and the Congress his progress in carrying out the provisions of this subsection."

SEC. 2. Section 5 of such Act of July 14, 1955 (42 U.S.C. 1857d), is amended by striking out "for each of the nine fiscal years during the period beginning July 1, 1955, and ending June 30, 1964, not to exceed \$5,000,000" and inserting in lieu thereof "for each fiscal year such sum as may be necessary".

SEC. 3. Such Act of July 14, 1955, is further amended by inserting at the end thereof a new section as follows:

"Sec. 9. (a) The pollution of the air in any State or States which endangers the health or welfare of any persons, shall be subject to abatement as provided in this section.

"(b) Consistent with the policy declaration of this Act, State, interstate, and local action to abate pollution of the air shall be encouraged and shall not be displaced by Federal enforcement action except as otherwise provided by or pursuant to a final order issued in accordance with subsection (e) of this section or a court order under subsection (g) of this section.

"(c) (1) Whenever requested by either the Governor of any State, or a State air pollution control agency, or (with the concurrence of the Governor or of the State air pollution control agency for the State in which the municipality is situated) the governing body of any municipality, the Surgeon General shall give formal notification of any air pollution to the State air pollution control agency and interstate agency, if any, of the State or States where any discharge or discharges causing or contributing to such air pollution originate and shall call promptly a conference of the State air pollution control agency and interstate agency, if any, of the State or States where the discharge or discharges causing or contributing to such pollution originate and of the State or States, which may be adversely affected by such pollution. Whenever the Surgeon General, on the basis of reports, surveys, or studies, has reason to believe that air pollution is endangering the health or welfare of persons in a State other than that in which the discharge originates is occurring, he may call such a conference on his own initiative.

"(2) The agencies called to attend such conference may bring such persons as they desire to the conference. Not less than three weeks' prior notice of the conference date shall be given to such agencies.

"(3) Following this conference, the Surgeon General shall prepare and forward to all the air pollution control agencies attending the conference a summary of conference discussions including (A) occurrence of pollution of the air subject to abatement under this section; (B) adequacy of measures taken toward abatement of the pollution; and (C) nature of delays, if any, being encountered in abating the pollution.

"(d) If the Surgeon General believes, upon the conclusion of the conference or thereafter, that effective progress toward abatement of such pollution is not being made and that the health or welfare of any person is being endangered, he shall recommend to the appropriate State air pollution control agency that it take necessary remedial action. The Surgeon General shall allow at least six months from the date he makes such recommendations for the taking of such recommended action.

"(e) If at the conclusion of such six-month period such remedial action is not taken or action which in the judgment of the Surgeon General is reasonably calculated to secure abatement of such pollution is not taken, the Secretary of Health, Education, and Welfare shall call a public hearing, to be held in or near one or more of the places where the discharge or discharges causing or contributing to such pollution originated, before a hearing board of five or more persons appointed by the Secretary. Each State in which any discharge causing or contributing to such pollution originates and each State claiming to be adversely affected by such pollution shall be given an opportunity to select one member of the hearing board and at least one member shall be a representative of the Department of Commerce appointed by the Secretary of Commerce, and not less than a majority of the hearing board shall be persons other than officers or employees of the Department of Health, Education, and Welfare. At least three weeks' prior notice of such hearing shall be given to the State air pollution control agencies and interstate agencies, if any, called to attend the aforesaid hearing and to the alleged polluter or polluters. Notwithstanding the preceding sentence any person alleged to be discharging matter contributing to the pollution, abatement of which is sought, may be joined as a party to such hearing if the fact of such alleged pollution does not become known until after such notice has been given. On the basis of the evidence presented at such hearing, the hearing board shall make findings as to whether pollution referred to in subsection (a) is occurring and whether effective progress toward abatement thereof is being made. If the hearing board finds such pollution is occurring and effective progress toward abatement is not being made it shall make recommendations to the Secretary of Health, Education, and Welfare concerning the measures, if any, which it finds to be reasonable and equitable to secure abatement of such pollution. Such findings and recommendations shall be the findings and recommendations of the Secretary except to the extent, on the basis of the evidence at such hearing, he believes additional or different findings or recommendations are warranted. The Secretary shall send his findings and recommendations to the person or persons discharging any matter causing or contributing to such pollution, together with an order specifying a reasonable time but not less than six months from date of issuance of such order to secure abatement of such pollution in accordance with such findings and recommendations. Such order shall become final on the sixtieth day after the date of its issuance. The Secretary shall also send a copy of such findings and recommendations and such order to the air pollution control agencies and interstate agencies, if any, attending the hearings.

"(f) An appeal may be taken from any such order of the Secretary of Health, Education, and Welfare by any person who has been made subject to such order to the United States court of appeals for the circuit in which any discharge or discharges causing or contributing to the pollution subject to abatement by such order originates by filing with such court a notice of appeal within sixty days from the date of issuance of the order. The jurisdiction of the court shall attach upon the filing of such notice. A copy of such notice shall forthwith be transmitted by the clerk of the court to the Secretary or any officer designated by him for that purpose and to any other person who received a copy of the Secretary's order. The Secretary shall thereupon file in the court the record of the proceedings before the hearing board as provided in section 2112 of title 28, United States Code, together with his findings of fact and recommendations. Such findings of the Secretary, if supported by substantial evidence when considered on the record as a whole, shall be conclusive, but the court for good cause shown may remand the case to the Secretary for the taking of additional evidence in such manner and upon such terms and conditions as the court may deem proper. The Secretary may thereupon make or cause to be made new or modified findings of fact and recommendations, and he shall file with the court the record of such further proceedings, the new or modified findings and recommendations, and his recommendations, if any, for the setting aside or modification of his original order. Such new or modified findings shall likewise be conclusive if supported by substantial evidence when considered on the record as a whole.

"(g) Upon the basis of the record of the proceedings filed with it, the court shall have jurisdiction to enter an order affirming or setting aside, in whole or in part, the order of the Secretary of Health, Education, and Welfare. The judgment of the court shall be final, subject to review by the Supreme Court of the United States upon certiorari or certification as provided in section 1254 of title 28 of the United States Code.

"(h) The United States district courts shall have jurisdiction of any civil action brought by the Attorney General at the request of the Secretary of Health, Education, and Welfare to enforce any order issued under this section by the Secretary of Health, Education, and Welfare, or by a United States court of appeals.

"(i) As used in this section, the term 'person' includes an individual, corporation, partnership, association, State, municipality, and political subdivision of a State.

"(j) As used in this section, the term 'municipality' means a city, town, borough, county, parish, district, or other public body created by or pursuant to State law.

"(k) There is hereby authorized to be appropriated not in excess of \$25,000,000 for an enforcement construction grant fund. The Surgeon General is authorized to make grants from such fund to any State, municipality, or interstate agency requested or required by the Commissioner or the Secretary to construct remedial facilities after a conference, hearing, or court action. Such grants shall be for the purpose of providing financial assistance in the construction of such remedial facilities, and shall be made only if sufficient need therefor is demonstrated to the satisfaction of the Surgeon General. No projects receiving grants from funds appropriated pursuant to section 5 of this Act shall receive any moneys from such grant fund. Sums appropriated for such grant fund shall remain available until expended, and shall be allotted in accordance with regulations prescribed by the Secretary of Health, Education, and Welfare."

[H.R. 10519, H.R. 10615, H.R. 11524, 87th Cong., 2d sess.]

A BILL To extend and strengthen the Federal air pollution control program

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Act of July 14, 1955, as amended (42 U.S.C. 1857-1857g), is hereby amended to read as follows:*

"DECLARATION OF POLICY

"SECTION 1. In recognition of—

"(a) the dangers to the public health and welfare, the injury to agricultural crops and livestock, the damage to and the deterioration of property, and the hazards to air and ground transportation, from air pollution,

"(b) the primary responsibilities and rights of the States and local governments in preventing and controlling air pollution, and

"(c) the need for national leadership in the development of cooperative Federal, State, and local programs for the prevention and control of air pollution,

it is hereby declared to be the policy of Congress to support, in Federal departments and agencies, and elsewhere, research, training, and other activities relating to the prevention and control of air pollution, and to provide Federal technical assistance, services, and financial aid to State and local governments in connection with the development and execution of their air pollution prevention and control programs. To this end, the Surgeon General of the Public Health Service shall administer this Act through the Public Health Service and under the supervision and direction of the Secretary of Health, Education, and Welfare.

#### "DEFINITIONS

"SEC. 2. When used in this Act—

"(a) the term 'air pollution control agency' means any of the following:

"(1) A State health authority, or, in the case of any State in which there is a single State agency other than the State health authority charged with responsibility for enforcing State laws relating to the prevention and control of air pollution, such other State agency;

"(2) An agency established by two or more States and having substantial powers or duties pertaining to the prevention and control of air pollution;

"(3) A city, county, or other local government health authority, or, in the case of any city, county, or other local government in which there is a single agency other than the health authority charged with responsibility for enforcing ordinances or laws relating to the prevention and control of air pollution, such other agency;

"(4) An agency of two or more cities, counties, or other local governments located in the same State or in different States and having substantial powers or duties pertaining to the prevention and control of air pollution.

"(b) The term 'State' means a State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, and Guam.

#### "COOPERATIVE ACTIVITIES

"SEC. 3. (a) The Surgeon General shall, subject to the provisions of section 10, cooperate with and encourage cooperative activities by all Federal departments and agencies having functions relating to the prevention and control of air pollution, so as to assure the utilization in the Federal air pollution control program of all appropriate and available facilities and resources within the Federal Government.

"(b) The Surgeon General shall encourage cooperative activities by the States and local governments for the prevention and control of air pollution; encourage the enactment of improved and, so far as practicable in the light of varying conditions and needs, uniform State and local laws relating to the prevention and control of air pollution; and encourage agreements and compacts between States for the prevention and control of air pollution.

"(c) The consent of the Congress is hereby given to two or more States to negotiate and enter into agreements or compacts, not in conflict with any law or treaty of the United States, for (1) cooperative effort and mutual assistance for the prevention and control of air pollution and the enforcement of their respective laws relating thereto, and (2) the establishment of such agencies, joint or otherwise, as they may deem desirable for making effective such agreements or compacts. No such agreement or compact shall be binding or obligatory upon any State a party thereto unless and until it has been approved by the Congress.

#### "RESEARCH, INVESTIGATIONS, TRAINING, AND OTHER ACTIVITIES

"SEC. 4. (a) The Surgeon General shall—

"(1) conduct in the Public Health Service,

"(2) encourage, cooperate with, and render technical services and financial assistance to air pollution control agencies and other appropriate public or private agencies, institutions, and organizations, and individuals, in the conduct of, and

"(3) promote the coordination of research, investigations, experiments, training, demonstrations, surveys, and studies relating to the causes, effects, extent, prevention, and control of air pollution.

"(b) In carrying out the provisions of the preceding subsection the Surgeon General is authorized to—

"(1) collect and make available, through publications and other appropriate means, the results of and other information, including appropriate recommendations in connection therewith, pertaining to such research and other activities;

"(2) cooperate with other Federal departments and agencies, with air pollution control agencies, with other public and private agencies, institutions, and organizations, and with any industries involved, in the preparation and conduct of such research and other activities;

"(3) make grants to air pollution control agencies, to other public or nonprofit private agencies, institutions, and organizations, and to individuals, upon such terms and conditions as he may determine;

"(4) contract with public or private agencies, institutions, and organizations, and with individuals, without regard to section 3648 of the Revised Statutes (31 U.S.C. 529);

"(5) provide training for, and make training grants to, personnel of air pollution control agencies and other persons with suitable qualifications;

"(6) establish and maintain research fellowships, in the Public Health Service and at public or nonprofit private educational institutions or research organizations;

"(7) collect and disseminate, in cooperation with other Federal departments and agencies, and with other public or private agencies, institutions, and organizations having related responsibilities, basic data on chemical, physical, and biological air quality and other information pertaining to air pollution and the prevention and control thereof.

#### "GRANTS FOR DEVELOPMENT, INITIATION, OR IMPROVEMENT OF AIR POLLUTION CONTROL PROGRAMS

"SEC. 5. (a) The Surgeon General is authorized to make grants of limited duration to air pollution control agencies for projects for the development, initiation, or improvement of programs for the prevention and control of air pollution.

"(b) Any grant for a project made under this section from the appropriations for any fiscal year shall include such amounts as the Surgeon General determines to be necessary for succeeding fiscal years for completion of the Federal participation in the project as approved by him.

"(c) Such grants shall be made, in accordance with regulations, upon such terms and conditions as the Surgeon General may find necessary to carry out the purposes of this section.

#### "SPECIFIC PROBLEMS OF AIR POLLUTION

"SEC. 6. The Surgeon General may conduct investigations and research and make surveys concerning any specific problem of air pollution confronting any air pollution control agency with a view to recommending a solution of such problem, if he is requested to do so by such air pollution control agency or if, in his judgment, such problem may affect or be of concern to communities in various parts of the Nation or may affect any community or communities in a State other than that in which the matter causing or contributing to the pollution originates.

#### "PUBLIC CONFERENCES ON SPECIFIC PROBLEMS OF AIR POLLUTION

"SEC. 7. (a) Whenever, on the basis of reports, surveys, or studies, he believes it appropriate, or whenever requested by any air pollution control agency, the Surgeon General may call a public conference on any problem of air pollution which may affect or be of concern to communities in various parts of the Nation or which may affect any community or communities in any State other than the State in which the matter causing or contributing to the pollution originates. Any such conference shall be conducted by a board composed of not less than five members, appointed by the Secretary of Health, Education, and Welfare, who shall be representative of the public, industry which is affected by or concerned with the problem, persons who are expert or have special knowledge in the matter, interested Federal departments and agencies, and interested air pollution control agencies.

"(b) Subject to regulations of the Surgeon General, an opportunity to be heard at such conference shall be accorded to all interested persons.

"(c) After consideration of the information presented at the conference and such other information as is available to it, the board shall make a report and recommendations to the Surgeon General on such matters as the existence, cause, and effect of the air pollution on which the conference was held, progress toward its abatement, and other related matters. Such report and recommendations, together with the comments and recommendations, if any, of the Surgeon General with respect thereto, shall be available to the community or communities, government agencies, and industries concerned, and, to the extent the Surgeon General deems appropriate, to the public, but shall not be binding on any person, agency, or organization.

"(d) Members of any conference board appointed pursuant to subsection (a) who are not regular full-time officers or employees of the United States shall, while participating in the conference conducted by such board or otherwise engaged on the work of such board, be entitled to receive compensation at a rate fixed by the Secretary, but not exceeding \$100 per diem, including travel time, and while away from their homes or regular place of business they may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by law (5 U.S.C. 73b-2) for persons in the Government service employed intermittently.

"COOPERATION BY FEDERAL AGENCIES TO CONTROL AIR POLLUTION FROM  
FEDERAL FACILITIES

"Sec. 8. It is hereby declared to be the intent of Congress that any Federal department or agency having jurisdiction over any building, installation, or other property shall, to the extent practicable and consistent with the interests of the United States and within any available appropriations, cooperate with the Department of Health, Education, and Welfare and with any air pollution control agency in preventing and controlling the pollution of the air in any area insofar as the discharge of any matter from or by such building, installation, or other property may cause or contribute to pollution of the air in such area.

"ADMINISTRATION

"Sec. 9. (a) The Surgeon General is authorized to prescribe, with the approval of the Secretary of Health, Education, and Welfare, such regulations as are necessary to carry out his functions under this Act. The Surgeon General may delegate to any officer or employee of the Public Health Service such of his powers and duties under this Act, except the making of regulations, as he may deem necessary or expedient.

"(b) Upon the request of an air pollution control agency, personnel of the Public Health Service may be detailed by the Surgeon General to such agency for the purpose of carrying out the provisions of this Act. The provisions of section 214(d) of the Public Health Service Act shall be applicable with respect to any personnel so detailed.

"(c) There are hereby authorized to be appropriated to the Department of Health, Education, and Welfare such sums as may be necessary to enable it to carry out its functions under this Act.

"(d) Payments under grants made under this Act may be made in installments, and in advance or by way of reimbursement, as may be determined by the Surgeon General.

"OTHER AUTHORITY NOT AFFECTED

"Sec. 10. This Act shall not be construed as superseding or limiting the authorities and responsibilities, under any other provision of law, of the Surgeon General, or of the Public Health Service, or of any other Federal officer, department, or agency.

"SHORT TITLE

"Sec. 11. This Act may be cited as the 'Federal Air Pollution Control Act'."

Sec. 2. The title of such Act is amended to read, "An Act to provide for air pollution prevention and control activities in the Public Health Service of the Department of Health, Education, and Welfare, and for other purposes."

[S. 455, 87th Cong., 1st sess.]

AN ACT To provide for public hearings on air pollution problems of more than local significance under, and extend the duration of, the Federal air pollution control law, and for other purposes

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That section 3 of the Act of July 14, 1955 (42 U.S.C. 1857b), is amended by striking out “, upon request of any State or local government air pollution control agency,” by striking out “such State or local government air pollution control agency” and inserting in lieu thereof “any State or local government air pollution control agency”, and by inserting before the period at the end thereof “, but only if requested to do so by such State or local government air pollution control agency or if, in his judgment, such problem may affect or be of concern to communities in various parts of the Nation or may affect any community or communities in a State other than that in which the matter causing or contributing to the pollution originated.”

SEC. 2. Such Act is further amended by redesignating sections 6, 7, and 8 as sections 7, 8, and 9, respectively, and inserting after section 5 the following new section:

“SEC. 6. (a) Whenever, on the basis of reports, surveys, or studies, he believes it appropriate, or whenever requested by any State or local government air pollution control agency, the Surgeon General may call a public hearing on any problem of air pollution which may affect or be of concern to communities in various parts of the Nation or which may affect any community or communities in any State other than the State in which the matter causing or contributing to the pollution originates. Any such hearing shall be conducted before a board composed of not less than five members, appointed by the Secretary of Health, Education, and Welfare, who shall be representative of the public, industry which is affected by or concerned with the problem, persons who are expert or have special knowledge in the matter, interested Federal agencies, and interested State or local government air pollution control agencies.

“(b) Subject to regulations of the Surgeon General, an opportunity to be heard at such hearing shall be accorded to all interested persons.

“(c) After consideration of the information presented at the hearing and such other information as is available to it, the board shall make a report and recommendations to the Surgeon General on such matters as the existence, cause, and effect of the air pollution on which the hearing was held, progress toward its abatement, and other related matters. Such report and recommendations, together with the comments and recommendations, if any, of the Surgeon General with respect thereto, shall be available to the community or communities, Government agencies, and industries concerned and, to the extent the Surgeon General deems appropriate, to the public, but shall not be binding on any person, agency, or organization.”

SEC. 3. Section 5 of such Act (42 U.S.C. 1857d) is amended by striking out “nine fiscal years beginning July 1, 1955, and ending June 30, 1964, not to exceed \$5,000,000” in the first sentence, and inserting in lieu thereof “eleven fiscal years beginning July 1, 1955, and ending June 30, 1966, not to exceed \$5,000,000”.

Passed the Senate September 20, 1961.

Attest:

FELTON M. JOHNSTON, *Secretary.*

DEPARTMENT OF AGRICULTURE,  
Washington, D.C., June 22, 1962.

HON. OREN HARRIS,  
*Chairman, Committee on Interstate and Foreign Commerce,  
House of Representatives.*

DEAR MR. CHAIRMAN: Thank you for your letter of March 6, 1962, giving us the opportunity to report on House bill 10519. The bill is entitled “To extend and strengthen the Federal air pollution control program.”

The bill would extend and strengthen the present Air Pollution Control Act (Public Law 159, 84th Cong.) as amended (42 U.S.C. 1857-1857g). H.R. 10519 includes the substantive provisions of the current Air Pollution Control Act and additional provisions which would add to or modify certain aspects of the current act.

This Department favors the enactment of H.R. 10519 as it is in accord with the President's message regarding legislation needed to strengthen the Federal effort to prevent air pollution relative to a health program.

This Department has a direct interest in the abatement of air pollution. Individuals who produce, handle, process, and market farm and forest products, including animals, crop plants, and forest trees upon which this country depends for food, fiber, shelter, and other materials, are affected adversely by air pollutants. Adverse effects include not only the impairment of health and comfort to the individual but also normal growth and development of farm animals and plants and of forest trees.

Air pollution, especially from effluents containing fluorine, sulfur and other compounds and combustion products, has been demonstrated to cause extensive crop, livestock, and forest damage. This Department has authority and will undertake such research and other appropriate action in the abatement of air pollution affecting agriculture as the relative importance of such problems make it necessary to include funds for them in budget requests.

The Bureau of the Budget advises that there is no objection to the presentation of this report from the standpoint of the administration's program.

Sincerely yours,

ORVILLE L. FREEMAN, *Secretary.*

DEPARTMENT OF THE ARMY,  
Washington, D.C., June 22, 1962.

HON. OREN HARRIS,  
*Chairman, Committee on Interstate and Foreign Commerce,  
House of Representatives.*

DEAR MR. CHAIRMAN: Reference is made to your request to the Secretary of Defense for the views of the Department of Defense with respect to H.R. 10519, 87th Congress, a bill to extend and strengthen the Federal air pollution control program. The Secretary of Defense has delegated to the Department of the Army the responsibility for expressing the views of the Department of Defense thereon.

The purpose of H.R. 10519 is to extend and strengthen the Federal air pollution control program by adding to the substance of the existing Federal air pollution control program, authorized in title 42, United States Code, provisions which would do the following:

- (a) recognize the responsibility of the Federal Government to provide national leadership;
- (b) authorize the Surgeon General to make grants of limited duration to air pollution control agencies for the development, initiation, or improvement of air pollution control programs (as distinct from his present authority to award grants-in-aid and contracts for research, training, and demonstration projects);
- (c) give consent of the Congress to the negotiation of agreements or compacts by two or more States for the establishment of agencies to effectuate such agreements or compacts;
- (d) authorize the Surgeon General to detail, upon request, personnel to air pollution control agencies;
- (e) authorize the Surgeon General to conduct studies on his own initiative as well as on request from an air pollution control agency, and to make recommendations, concerning any air pollution problem of an interstate nature or of significance to, or typical of air pollution problems confronting, communities in different parts of the Nation;
- (f) eliminate the time limitation (June 30, 1964) and \$5 million ceiling on annual appropriations.

The bill also contains a disclaimer of any intention to limit the functions of any Federal agency under any other provision of law relating to air pollution, which disclaimer appears to be at least as broad as the disclaimer already contained in section 1857(f) of title 42, United States Code.

The Department of the Army on behalf of the Department of Defense has considered the above-mentioned bill. The Department of Defense recognizes the danger to public health and welfare from air pollution and supports air pollution abatement programs to the full extent commensurate with military security. To this end, the Department of Defense cooperates by making available unclassified results of research into the general control of air pollution for the benefit of the public. In the light of the above, and of the disclaimer adverted to in the preceding paragraph, the Department of the Army on behalf of the Department of Defense interposes no objection to subject bill.

Enactment of this legislation will cause no apparent increase in budgetary requirements of the Department of Defense.

This report has been coordinated within the Department of Defense in accordance with procedures prescribed by the Secretary of Defense.

The Bureau of the Budget advises that, from the standpoint of the administration's program, there is no objection to the presentation of this report for the consideration of the committee.

Sincerely yours,

ELVIS J. STAHR, Jr.,  
*Secretary of the Army.*

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EXECUTIVE OFFICE OF THE PRESIDENT,  
BUREAU OF THE BUDGET,  
Washington, D.C., March 28, 1962.

HON. OREN HARRIS,  
*Chairman, Committee on Interstate and Foreign Commerce,  
House of Representatives, Washington, D.C.*

DEAR MR. CHAIRMAN: This is in response to your request of March 6, 1962, for the views of the Bureau of the Budget on H.R. 10519, a bill "To extend and strengthen the Federal air pollution control program."

This bill includes the substantive provisions of the current Air Pollution Control Act and would add to or modify the current act by:

- (a) recognition of the need for the Federal Government to provide national leadership;
- (b) authorization to the Surgeon General to make project grants of limited duration to State and local air pollution control agencies for the development, initiation, or improvement of control programs;
- (c) consent of the Congress to the negotiation of agreements or compacts by two or more States for cooperative effort and mutual assistance, and for the establishment of agencies to effectuate such agreements or compacts;
- (d) authorization to the Surgeon General to detail, upon request, personnel to air pollution control agencies;
- (e) authorization to the Surgeon General to conduct studies on his own initiative and to make recommendations concerning any air pollution problem of interstate nature or of significance to, or typical of air pollution problems confronting, communities in different parts of the Nation;
- (f) authorization to the Surgeon General to call a public conference, on his own initiative or upon request of any air pollution control agency, for voluntary formal expression of views by interested persons on any problem of air pollution which is of concern to the communities in various parts of the Nation, or which is of interstate nature;
- (g) elimination of the time limitation (June 30, 1964) and \$5 million ceiling on annual appropriations.

This proposed legislation was prepared by the administration and would carry out the recommendation for strengthening the Federal effort to prevent and control air pollution contained in the President's message to the Congress on February 27, 1962, on health programs. I am authorized to advise you that the enactment of H.R. 10519 would be in accord with the program of the President.

Sincerely yours,

PHILLIP S. HUGHES,  
*Assistant Director for Legislative Reference.*

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THE SECRETARY OF COMMERCE,  
Washington, D.C., July 6, 1962.

HON. OREN HARRIS,  
*Chairman, Committee on Interstate and Foreign Commerce,  
House of Representatives,  
Washington, D.C.*

DEAR MR. CHAIRMAN: This letter is in reply to your request for the views of this Department with respect to H.R. 10519, a bill "To extend and strengthen the Federal air pollution control program."

This bill was submitted to the Congress by the Department of Health, Education and Welfare and would carry out the recommendations made by the President in his special health message. Among other things the bill would direct the

Surgeon General of the Public Health Service, under the supervision and direction of the Secretary of Health, Education, and Welfare to:

1. Assure the utilization in the Federal air pollution control program of all appropriate and available facilities and resources within the Federal Government through a program of cooperative activities.
2. Encourage the States and local governments in the prevention and control of air pollution.
3. Conduct research, and encourage the conduct of research through financial assistance, in air pollution through grants, contracts, training, research fellowships, cooperative activities and the collection and dissemination of information pertaining to the prevention and control of air pollution.
4. Make grants of limited duration to air pollution control agencies.
5. Conduct investigations, research and studies into air pollution problems if requested to do so by an air pollution control agency or if, in his judgment, such problems are of broad national interest or interstate in character.
6. Call a public conference on any problem of air pollution which is interstate in nature or is otherwise of national significance.
7. Elimination of the time limitation (June 30, 1964) and \$5 million ceiling on annual appropriations.

This Department has consistently supported a vigorous Federal program in air pollution since its inception in 1955. Air pollution affects every segment of our life and economy. It causes large monetary losses due to corrosion and soiling; it demonstrably affects our weather now and, may present a serious geophysical problem in the future. These important effects are in addition to the health burden placed on our population. This Department, through its Weather Bureau and its National Bureau of Standards, has an interest in, and can make contributions to, better solutions of the total air pollution problem.

Section 3(a) relating to cooperative activities recognizes the interest of other Federal departments and agencies in air pollution. It would require the Surgeon General to encourage cooperative activities with departments and agencies having functions relating to the prevention and control of air pollution so as to assure utilization of all appropriate and available Federal facilities and resources in the air pollution control program. We believe that a continuing, integrated, Federal program which utilizes the valuable competence in the various Federal departments and agencies is essential in order to combat the increasing air pollution problem.

This Department favors the enactment of this legislation.

The Bureau of the Budget advised that there would be no objection to the submission of this report from the standpoint of the administration's program. The Bureau further advised that enactment of this legislation would be in accord with the program of the President.

Sincerely yours,

EDWARD GUDEMAN,  
*Under Secretary of Commerce.*

COMPTROLLER GENERAL OF THE UNITED STATES,  
*Washington, April 13, 1962.*

HON. OREN HARRIS,  
*Chairman, Committee on Interstate and Foreign Commerce,  
House of Representatives.*

DEAR MR. CHAIRMAN: Your letter of March 13, 1962, requests our comments on H.R. 10519, a bill to extend and strengthen the Federal air pollution control program.

Since we have no particular information concerning the desirability of the proposed legislation we make no recommendations concerning the merits of the bill, however, the following comments are offered for your consideration.

The bill is similar in many respects to the Federal Water Pollution Control Act, 33 U.S.C. 466, which originally vested authority under that act in the Surgeon General. Public Law 87-88, approved July 20, 1961, amended that act and transferred the authority contained therein to the Secretary of Health, Education, and Welfare. Concerning the desirability of such transfer of authority, the House Committee on Public Works stated, at page 4 of House Report No. 306, 87th Congress, in part as follows:

"\* \* \* During public hearings the committee heard testimony favoring the establishment of a Federal Water Pollution Control Administration in the Department of Health, Education, and Welfare. The President has urged the estab-

lishment of a 'special unit' in the Public Health Service to administer both air and water pollution control programs.

"The Secretary of Health, Education, and Welfare, recognizing the need to upgrade pollution control activities in his Department, asked the committee for \* \* \* time to take a complete fresh look at the situation and the various proposals for dealing with it."

"In order to give the Secretary complete flexibility in effectuating his decision relating to the proper administrative status of this program the bill approved by the committee would transfer responsibility for the administration of the Federal water pollution control program from the Surgeon General to the Secretary of Health, Education, and Welfare.

"This action is in conformity with recommendation No. 14 of the first report of the Hoover Commission on Organization of the Executive Branch of the Government (H. Doc. 55, 81st Cong.) which states:

"Under the President, the heads of departments must hold full responsibility for the conduct of their departments. There must be a clear line of authority reaching down through every step of the organization and no subordinate shall have authority independent from that of his superior."

In view of this recent action by the Congress on water pollution control legislation, your committee may wish to revise the present bill to also vest authority for air pollution control in the Secretary of Health, Education, and Welfare.

Section 4(b)(6) of the bill provides for the establishment and maintenance of research fellowships. This section is similar to research fellowships provided by section 4(a)(4) of the Federal Water Pollution Control Act (33 U.S.C. 466c(a)(4)) except that under the Federal Water Pollution Control Act reports must be furnished to the Congress on the operations thereunder. Your committee may wish to consider whether similar reports should be required on operations under section 4(b)(6) of the bill.

No provision is made in the bill to require a grantee to keep adequate cost records of the projects or undertakings to which the Federal Government makes financial contributions, or to authorize the Surgeon General or the Comptroller General to have access to the grantee's records for purposes of audit and examination. In view of the increase in grant programs over the last several years, we believe that in order to determine whether grant funds have been expended for the purpose for which the grant was made, the grantee should be required by law to keep records which would fully disclose the disposition of those funds. We believe also that the agency as well as the General Accounting Office should be permitted to have access to the grantee's records for the purpose of audit and examination. We suggest, therefore, that a new section be added to the bill as follows:

#### "RECORDS AND AUDIT

"(a) Each recipient of assistance under this Act shall keep such records as the Surgeon General shall prescribe, including records which fully disclose the amount and disposition by such recipient of the proceeds of such assistance, the total cost of the project or undertaking in connection with which such assistance is given or used, and the amount of that portion of the cost of the project or undertaking supplied by other sources, and such other records as will facilitate an effective audit.

"(b) The Secretary of Health, Education, and Welfare and the Comptroller General of the United States, or any of their duly authorized representatives, shall have access for the purpose of audit and examination to any books, documents, papers, and records of the recipients that are pertinent to the grants received under this Act."

We would also favor the addition of a like section as an amendment to the Federal Water Pollution Control Act. Language similar to that suggested above is contained in H.R. 132, 87th Congress, reported by your committee August 21, 1961, and in section 25 of the Area Redevelopment Act, Public Law 87-27, approved May 1, 1961.

Sincerely yours,

JOSEPH CAMPBELL,  
Comptroller General of the United States.

## AIR POLLUTION

FEDERAL AVIATION AGENCY,  
Washington, D.C., June 28, 1962.

HON. OREN HARRIS,  
Chairman, Committee on Interstate and Foreign Commerce,  
House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: This is in reply to your request of March 6, 1962, for the views of this Agency with respect to H.R. 10519, a bill to extend and strengthen the Federal air pollution control program.

This proposal recognizes the need for national leadership in the development of cooperative Federal, State, and local programs for the prevention and control of air pollution by: (a) encouraging interstate compacts for the prevention and control of air pollution; (b) authorizing the Surgeon General to make grants to air pollution control agencies and to others for research, and for the development and initiation, or improvement of programs for the prevention of air pollution; and (c) permitting the Surgeon General to initiate research and to make surveys concerning any specific problem of air pollution.

Authority is afforded the Surgeon General to call a public conference on any problem of air pollution, to be conducted by a five-member board, and at which interested persons shall be afforded a hearing. The board shall make an advisory report and recommendations to the Surgeon General with respect to the air pollution problem under consideration.

This Agency defers to the Department of Health, Education, and Welfare in that it is the Department primarily concerned with the subject of the proposal.

The Bureau of the Budget has advised that there is no objection from the standpoint of the administration's program to the submission of this report to your committee.

Sincerely,

N. E. HALABY, *Administrator.*

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,  
March 14, 1962.

HON. OREN HARRIS,  
Chairman, Committee on Interstate and Foreign Commerce,  
House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: This is in response to your request for a report on H.R. 10519, a bill to extend and strengthen the Federal air pollution control program.

H.R. 10519 embodies the administration's proposals in the area of air pollution. In the form of a draft bill it was transmitted by this Department to the Speaker of the House of Representatives on February 27, 1962, and was referred to your committee on March 1.

For the reasons given in our letter to the Speaker in support of the bill we recommend its early enactment.

Sincerely,

ABRAHAM RIBICOFF, *Secretary.*

U.S. DEPARTMENT OF THE INTERIOR,  
OFFICE OF THE SECRETARY,  
Washington, D.C., June 29, 1962.

HON. OREN HARRIS,  
Chairman, Committee on Interstate and Foreign Commerce,  
House of Representatives, Washington, D.C.

DEAR MR. HARRIS: There is pending before your committee H.R. 10519, a bill to extend and strengthen the Federal air pollution control program.

We recommend the enactment of the bill.

As the title of the bill states, it is intended to extend and strengthen the present Federal air pollution control program. The bill provides for air pollution prevention and technological source control activities within the Federal Government wherever these can be provided by available resources. The Department of the Interior has been active in air pollution abatement research and investigations since before 1912, in which year its Bureau of Mines published three bulletins on causes and means of preventing smoke emissions from coal-burning equipment. Publications followed shortly that recorded work of the Bureau of Mines on control of fumes from metallurgical processes and on developing adequate ventilation standards for automotive vehicular tunnels. Through the years that followed until mid-1954, during which period the major assigned Federal respon-

sibilities regarding air pollution were concentrated within this Department, a long and impressive list of achievements and their documenting publications was developed by the Bureau of Mines.

Since 1955, this Department has been pleased to cooperate, through its Bureau of Mines, in the Federal air pollution abatement program that became a primary responsibility of the Public Health Service under Public Law 84-159. The Bureau of Mines air pollution interests center around technologic developments for the control of the sources of pollution which result from the production, processing, and utilization of minerals, mineral fuels, and their products. Bureau research of automobile and diesel engine exhaust has materially contributed to the knowledge on this subject. Research on the problem of reducing air pollution from thermal powerplants and other industrial, fuel-burning installations has provided much needed new information on the development of economic means for reducing the concentration of sulfur dioxide and oxides of nitrogen in the effluent gases from the stack.

We favor the enactment of H.R. 10519 because we believe there is a need for increased emphasis on air pollution abatement and because the bill provides the means and encouragement for the Surgeon General to utilize fully the resources available to him from agencies such as our own that have much to offer to the Federal program of air pollution abatement.

The Bureau of the Budget has advised that there is no objection to the presentation of this report from the standpoint of the administration's program.

Sincerely yours,

JOHN A. CARVER, Jr.,  
Assistant Secretary of the Interior.

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U.S. DEPARTMENT OF LABOR,  
OFFICE OF THE SECRETARY,  
Washington, June 22, 1962.

HON. OREN HARRIS,  
Chairman, Committee on Interstate and Foreign Commerce,  
House of Representatives, Washington, D.C.

DEAR CONGRESSMAN HARRIS: This is in further response to your request for the views of the Department of Labor on H.R. 10519, a bill to extend and strengthen the Federal air pollution control program.

We strongly urge the enactment of H.R. 10519 which is the administration's proposal for strengthening the Federal effort to prevent air pollution.

Earlier this year President Kennedy called attention to the problem of air pollution in his special message on health care and also in his conservation message. As the President pointed out, pollution of the air we breathe is a growing and serious problem in many areas; since fresh air can neither be piped into cities nor stored for future use, our only protection is to prevent pollution. The President drew a parallel between legislation needed in the field of air pollution and the legislation passed last year by Congress to enable us to accelerate our efforts to combat water pollution.

We believe that the proposals contained in H.R. 10519 would be of great benefit to labor and industry, as well as to the general public. We prefer, however, to leave detailed discussion of its provisions to those agencies primarily concerned with its administration.

The Bureau of the Budget advises that there is no objection to the presentation of this report from the standpoint of the administration's program.

Yours sincerely,

ARTHUR J. GOLDBERG,  
Secretary of Labor.

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DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,  
February 27, 1962.

SPEAKER OF THE HOUSE OF REPRESENTATIVES,  
Washington, D.C.

DEAR MR. SPEAKER: I am enclosing for your consideration a draft of a bill to extend and strengthen the Federal air pollution control program by amending the present Air Pollution Control Act, Public Law 159, 84th Congress, as amended (42 U.S.C. 1857-1857g). This bill would carry out the recommendations made by the President in his special health message.

The draft bill is broader in scope than S. 455, which was passed by the Senate last year. The bill includes the substantive provisions of the current Air Pollution Control Act and additional provisions which would add to or modify certain aspects of the current act by:

(a) Recognition of the need for the Federal Government to provide national leadership;

(b) Authorization to the Surgeon General to make project grants of limited duration to State and local air pollution control agencies for the development, initiation, or improvement of control programs;

(c) Consent of the Congress to the negotiation of agreements or compacts by two or more States for cooperative effort and mutual assistance, and for the establishment of agencies to effectuate such agreements or compacts;

(d) Authorization to the Surgeon General to detail, upon request, personnel to air pollution control agencies;

(e) Authorization to the Surgeon General to conduct studies on his own initiative and to make recommendations concerning any air pollution problem of interstate nature or of significance to, or typical of air pollution problems confronting communities in different parts of the Nation;

(f) Authorization to the Surgeon General to call a public conference, on his own initiative or upon request of any air pollution control agency, for voluntary formal expression of views by interested persons on any problem of air pollution which is of concern to communities in various parts of the Nation, or which is of interstate nature;

(g) Elimination of the time limitation (June 30, 1964) and \$5 million ceiling on annual appropriations.

While providing for needed Federal leadership in dealing with air pollution problems, the bill recognizes the primary responsibilities of the States and local governments in preventing and controlling air pollution.

Air pollution is now a serious problem. In the future, unless appropriate action is taken, the problem will increase greatly because of further industrial growth and concentration of population in urban areas. Our Nation's technological society produces great material benefits for the people, but also creates, as byproducts, potential problems of contamination of our environment. Air pollution is not a temporary problem, but one which will require continuing attention. Continuing research and control efforts will be necessary if major adverse effects on the public health and welfare are to be prevented.

In view of the existing situation and the future potential, there is immediate need for a permanent and more effective Federal air pollution control program. In view of the permanent nature of the problem and the need for continuing national attention to it, we consider the authorities proposed in the draft bill essential to the effective exercise of national leadership in dealing with this important problem.

Over the past 6 years, the Public Health Service of this Department has carried on, under the existing law, a limited program relating to air pollution. The activities of the Public Health Service to date have provided useful information about the extent of air pollution in the United States, the effects of air pollution upon health and property, and practical means for measuring, assessing, and controlling air pollution. Technical assistance has been provided to States and communities on the appraisal of air pollution problems and on dealing with specific air pollution control problems. The Service has also conducted and supported the training of technical personnel needed in air pollution control activities. Although considerable progress has been made, much greater effort is needed if appropriate progress is to be accomplished nationally in both research and control activities.

Largely as a result of the Public Health Service's research program on air pollution, an impressive body of evidence is accumulating which links air pollution with increased mortality from cardiorespiratory causes, increased susceptibility to respiratory disease, and interference with normal respiratory function. It is important to the health and welfare of our people that the leads which have been developed be followed up quickly and thoroughly. The needs for research throughout the Nation in relation to air pollution problems have been evaluated recently by an eminently qualified group of non-Federal consultants appointed by the Surgeon General of the Public Health Service. Their report, "National Goals in Air Pollution Research," recommends approximately a threefold increase nationally in such research, with proportionate increase in the Federal share of such overall effort.

In addition to a substantially increased research program on air pollution problems, there is urgent need for greater Federal leadership to stimulate more

adequate application of existing technical knowledge in the actual prevention and control of air pollution on the part of industry, the States, and local governments. The situation nationally is far from adequate to satisfy the needs for air pollution regulatory control on State and local levels. Studies by the Public Health Service indicate that all communities in the United States having a population greater than 50,000, and about 40 percent of the communities of the 2,500-50,000 bracket, have air pollution problems. In total, about 6,000 communities in this country have air pollution problems of varying degree for which active control programs should be initiated or strengthened. At this time, air pollution programs having full-time staffs provide coverage to about only 45 percent of the residents in areas having air pollution problems, and many of these existing programs are not adequate for the intended purpose. To provide the needed Federal leadership in stimulation of greater effort throughout the Nation at State and local levels in the application of existing technical knowledge to the actual prevention and control of air pollution, we consider several steps to be necessary:

First, the existing act provides some authorities which are useful in exercising such leadership, namely, those providing for technical assistance, the training of personnel, and financial aid to States and local communities for surveys and studies and for demonstration projects. The bill would permit more effective implementation of these authorities than has been possible to date because of existing limitations of the present act.

Second, Federal assistance and stimulation in developing appropriate legal and administrative procedures for dealing with air pollution problems in local, regional, State, and interstate areas is highly desirable. The provisions of section 3 of the draft bill pertaining to cooperative activities would authorize several types of such assistance applicable to a variety of common situations. For example, there is much need to incorporate into many existing air pollution control ordinances and regulations provisions reflecting improved technical practices which have been and are being developed. Also, in our opinion, there is urgent need for more adequate State assistance on technical aspects of air pollution problems, particularly to smaller communities where technical competence for coping with such matters is not generally available. The development of cooperative activities or joint action programs by local governments which share common air pollution problems with neighboring communities is also highly desirable and should be encouraged. The major portion of the urban population of the United States is concentrated in such community aggregations. The draft bill gives special attention to and encouragement for the development by the States of compacts or agreements pertaining to the many such situations which are interstate in nature.

Third, we consider it highly desirable and recommend that specific legislative authority be provided, as included in section 5 of the draft bill, to make project grants of limited duration to air pollution control agencies for development, initiation, or improvement of State and local air pollution control programs. Authorization of such project grants to State and local governments would expand existing authorities and permit financial assistance of two general types:

- (a) grants for appraisal of air pollution problems and development of control programs adapted to the needs of the specific grantees, and
- (b) grants for a limited period to initiate control programs or to improve existing programs.

The grants for appraisal of problems and development of control programs are proposed in order to encourage this basic step in regulatory program development. In recognition of the fact that specific State or local government funds may not be available for air pollution program purposes, no firm requirements for matching of Federal grant funds would be specified; there would be instances where some State or local financial participation would be appropriate and would be encouraged.

Grants to States and local governments for the initiation or improvement of air pollution regulatory control programs would be made on a project basis upon approval of applications based upon a "workable plan." Such grants would be made for a limited period, with support in most cases not extending beyond 3 to 5 years. The workable plan requirement would include the minimum standards needed for a reasonable assurance of attaining the grant purpose, such as the availability of appropriate regulatory laws, and the provision of suitable technical personnel. Matching funds from the State or local government applicant would be an appropriate requirement for this phase of Federal grant assistance.

The grant program would also include provision for stimulatory grants, on a matching basis, to State air pollution control agencies to assist them in conducting desirable State-level activities for problem surveillance and extension of technical assistance to local agencies. Such State technical support is particularly needed

in dealing with problems of smaller communities, and with interjurisdictional problems. Provision would also be made in the grant program to assist in the establishment and extension of regulatory control programs where interjurisdictional effort, either interstate or interlocal, is indicated as desirable.

Any grant for a developmental project would include such amounts as the Surgeon General determined to be necessary for succeeding fiscal years for completion of the Federal participation in the project. Any grant for a project to initiate a control program, or to improve a control program, would similarly include such amounts.

The moderate financial aid provided by this proposed grant program will serve as an effective national stimulation to needed State and local air pollution control activities. This project grant approach to Federal assistance would provide flexibility in dealing with the variations in extent and degree of the problems encountered in different areas, and with the variety of administrative approaches in use by State and local air pollution control agencies. Appropriate regulations, governing matching funds requirements, and other conditions of award of these grants, and providing the necessary flexibility in grant administration, would be promulgated after consultation with representatives of State and local governments.

The draft bill further implements the Federal leadership role in three significant ways:

First, the Surgeon General would be authorized to undertake, on his own initiative, studies of any air pollution problem which may affect or be of concern to communities in various parts of the country or which is interstate in character.

Second, the draft bill would authorize the Surgeon General to call a public conference, on his own initiative or on the request of an air pollution control agency, on any air pollution problem which may affect or be of concern to communities in various parts of the country or which is interstate in character. This would enable the Department of Health, Education, and Welfare to make a significant contribution by exercising Federal leadership in dealing with air pollution problems of broad significance.

Such conferences would contribute to the development and publication of recommendations based on the evaluation of data developed by the Public Health Service or presented by others, as well as on full consideration of the points of view of all parties having a significant interest in such problems. Some of these problems are common to many communities in various parts of the Nation. Others involve pollution from sources within one State which, through the movement of air masses, affects communities in other States. These types of problems can be expected to increase in number and extent with further urbanization, and the development of solutions for them may in many cases transcend the capabilities of local agencies, and even of State control authorities. The recommendations resulting from the conferences would not be binding upon the participants or anyone else; the purpose of the conferences would be simply to develop such recommendations as a means of focusing public attention on and developing support for the most carefully considered solutions to the problems which occasioned the conferences.

Third, the Surgeon General would be permitted, upon request of an air pollution control agency, to detail personnel of the Public Health Service to such an agency for carrying out provisions of the act. Although under the current act the numbers of technical and professional persons trained has increased notably, there remains a considerable gap in meeting the demands for such personnel. The Division of Air Pollution of the Public Health Service can improve Federal-State-local relationships and provide effective assistance by the detail of personnel to control agencies.

The elimination from the present act of the time limitation and the ceiling on annual appropriations is essential to adequate implementation of the several elements of the strengthened air pollution program as provided for in the draft bill. Air pollution is a permanent problem of our society and will require continued Federal attention. Removal of the time limitation on conduct of the program is necessary to implement effectively the Federal function, particularly as it involves cooperative activities with other organizations. With respect to the appropriation ceiling, we further believe that such a ceiling is not desirable in legislation authorizing continuing research and technical assistance activities. Such a ceiling may be an undesirable restriction at times and at other times tend to encourage requests larger than consistent with overall circumstances and fiscal policy. We believe that fiscal control can best be exercised through the annual appropriation process.

The existing act, and the draft bill, are concerned with the air pollution control program conducted by the Department of Health, Education, and Welfare. Other Federal departments and agencies have functions related to the study and control of air pollution. The draft bill, recognizing the contribution and interest of these other departments and agencies in air pollution matters, provides that the Surgeon General shall cooperate with and encourage cooperative activities by all such departments and agencies, and that the bill does not supersede or limit the authorities and responsibilities of such departments and agencies under other provisions of law.

In summary, then, I believe the draft bill would strengthen the Federal air pollution program by providing for three essential elements: first, an expanded research program related to the causes, effects, and control of air pollution; second, Federal assistance to States and localities in the development and support of programs designed to apply more effectively the knowledge we now have and will have in the future to the actual prevention and control of air pollution; and third, vigorous leadership in obtaining increased attention and the devotion of greater resources to the problems of air pollution control by all levels of government, industry, and the public.

I shall appreciate it if you will be good enough to refer the enclosed draft bill to the appropriate committee for consideration.

In compliance with Public Law 801, 84th Congress, there is enclosed a statement of cost estimates and personnel requirements which would be entailed by enactment of the proposed legislation.

The Bureau of the Budget advises that enactment of this legislation would be in accord with the program of the President.

Sincerely yours,

ABE RIBICOFF, *Secretary.*

PROGRAM: FEDERAL AIR POLLUTION CONTROL

*Estimate of additional cost, 1963-67*

	Increased costs under new authority proposed				
	1963	1964	1965	1966	1967
<b>Appropriation requirements:</b>					
Grants to States and local agencies for program initiation and improvement.....	\$5,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$7,000,000
Investigations of interstate or national problems initiated by Public Health Service.....	100,000	200,000	250,000	300,000	300,000
Total requirements.....	5,100,000	6,200,000	6,250,000	6,300,000	7,300,000
<b>Expenditures:</b>					
Grants to States and local agencies for program initiation and improvement.....	1,000,000	2,200,000	3,400,000	4,600,000	6,000,000
Investigations of interstate or national problems initiated by Public Health Service.....	90,000	190,000	238,000	290,000	290,000
Total expenditures.....	1,090,000	2,390,000	3,638,000	4,890,000	6,290,000
Man-years of employment for investigations of interstate or national problems initiated by Public Health Service.....	7	15	19	23	23

NOTE.—The above projected additional costs relate only to new substantive authorizations under the proposed legislation. Costs of implementation of additional activity under existing authorization are not included. Project grants to State and local agencies from the appropriations for any fiscal year would include such amounts as were determined to be necessary for succeeding fiscal years for completion of the Federal participation in the projects.

Mr. ROBERTS. The people of this country have been concerned about air pollution for many years but in recent years, with the advent of smog on the west coast and in other areas, the public concern has been increasing.

Legislation setting up a 5-year program of Federal aid was enacted in July 1955. This was Public Law 159 of the 84th Congress. That law recognizes air pollution may endanger the public health and welfare, injure crops and livestock, damage property, and create costly

hazards for air and ground transportation. No Federal enforcement activity is authorized by that act and the responsibility for controlling air pollution is left with State and local governments.

In September 1959, the original act was extended 4 years. Thus we need to act this session if the program is not to be interrupted.

In 1960, Congress enacted legislation sponsored by our colleague on the committee, Mr. Schenck, calling on the Surgeon General to make an investigation of motor vehicle exhaust fumes and report to the Congress on the effect of these fumes on human health. This was filed early this month. The report has a great deal of valuable information on this important problem, but points out that further study is needed. That study would be made possible by the legislation we are considering today.

The subcommittee is pleased to have this opportunity to obtain the views and suggestions of our colleagues regarding the legislation needed to provide a Federal program to cope with this growing problem of air pollution.

I have at this time a statement from the Honorable James C. Corman, Member of Congress from California. It will be inserted in the record.

(The statement of Hon. James C. Corman follows:)

STATEMENT BY HON. JAMES C. CORMAN, A REPRESENTATIVE IN CONGRESS  
FROM THE STATE OF CALIFORNIA

Mr. Chairman, my name is James C. Corman. I am the Representative to Congress from the 22d District of California. I am most pleased and honored to have the privilege of offering this brief statement in support of H.R. 10519, to extend and strengthen the air pollution control program of the United States.

As a member of the Los Angeles City Council before coming to Congress, I found myself particularly close to the problem of air pollution in the Nation's third largest city. As I am sure you know, the problem is particularly acute in Los Angeles—due to several factors, including a peculiar weather phenomenon known as the inversion layer, as well as the high intensity of automobiles and the presence of many industries which release pollutants into the atmosphere.

The fight against air pollution in our part of the country has been a long and expensive one, starting right after World War II, when "smog"—a word coined in Los Angeles, incidentally—became an increasingly serious blight on our city. The county of Los Angeles established an air pollution control district, which is now headed by Mr. R. Smith Griswold. I venture to say that Mr. Griswold and his team of scientists and enforcement personnel have dug deeper and more thoroughly into this matter than any other local authority in this area of public concern.

The cost to the Los Angeles taxpayer has been high, but the benefits have been equally good. Although air pollution remains a problem, the intensity and frequency of the attacks are diminishing every year. I believe most of the credit must go to Mr. Griswold and his team, who have instituted farsighted programs for control of smog and have fought them through local and State governments, sometimes against great public opposition.

Because the cost of this battle has been so high for Los Angeles taxpayers, I have long felt that a reappraisal of primary responsibility is in order. Not that I would exempt local governments, such as ours in Los Angeles, from responsibility in areas of purely local concern. For example, I don't believe Los Angeles taxpayers should be asked to finance research into pollution stemming from coal burners—because we don't burn coal in our part of the country—any more than Pittsburgh taxpayers should be saddled with the problem of oil refinery pollutants.

On the other hand, many sources of smog are universal: the automobile exhaust, in particular. I see no reason why the responsibility for combating and overcoming this problem should devolve solely upon the taxpayer in Los Angeles, or any other city, nor why our research (which will benefit citizens of every community troubled with smog) should go along independent of, and oblivious to, similar research programs in other communities or under the Federal Government. I believe, in short, that the Federal Government has a responsibility in this area—and through that Government, so do all the citizens of our great Nation who suffer from or are potential sufferers from this menace.

The legislation before you, as I understand it, introduces some new elements into the Federal Government's concern in air pollution—notably in the areas of appraisal of pollution problems, and assistance in their control. I believe this is something we should have done long ago. I think I can speak for every citizen of Los Angeles County when I say that any step which hastens the day of pure, clean air in our city would be welcomed. H.R. 10519 is a giant step in that direction.

In conclusion, Mr. Chairman, may I commend the bill and its author, and urge its favorable consideration by this committee. And I earnestly hope that it is adequately funded by the appropriate committees of the Congress, in order that its aims be properly carried out.

Thank you very much, Mr. Chairman.

Mr. ROBERTS. Also I would like to insert into the record statements received from our colleagues the Honorable John E. Fogarty and the Honorable Gordon L. McDonough. The statements will be inserted at this point.

(The statements of Hon. John E. Fogarty and Hon. Gordon L. McDonough follow:)

STATEMENT OF HON. JOHN E. FOGARTY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF RHODE ISLAND

Mr. Chairman, I should like to make some brief comments in support of H.R. 10519 and identical bills H.R. 10615 and 11524.

As chairman of the House Labor, Health, Education, and Welfare Appropriation Subcommittee, I have had a special opportunity to become familiar with the Nation's health problems, including air pollution. As you know, my committee has held extended hearings on this and other environmental health problems, during which we have taken testimony from many outside specialists as well as those in the Public Health Service.

In a speech which I delivered in Rhode Island last October and which was published in the Congressional Record of March 14, 1962, I included the following statement: "As a result of these hearings and my further study of the air pollution problem, I am convinced that its solution will require a cooperative, a joint approach, on the part of the Federal Government, the States, and local communities. For none of these can do alone what needs to be done."

In my opinion, Mr. Chairman, these identical bills are well designed to foster the development of just such a cooperative approach. Of great significance to me is the recognition embodied in these bills of the necessity to translate research into action. Greater emphasis needs to be focused on the application of existing knowledge in air pollution control; that is, action to prevent or abate pollution. These bills recognize the primary responsibility of State and local government agencies to translate existing knowledge into action. They further recognize that these agencies need Federal technical and financial aid if they are to develop and carry out their programs effectively. These bills would continue the philosophy and policy of the Federal program with respect to complementary roles of Federal, State, and local governments.

There are many communities in the United States which suffer from the effects of various kinds of air pollution, but have done little or nothing about them. The reasons may be financial or they may be merely due to a lack of technical know-how. H.R. 10519 and its sister bills will do much to correct this situation by providing new means of Federal leadership and impetus to action in many communities now quietly suffering from polluted air. I'm happy to note that my own district, Providence, R.I., has been active for some time in the control of air pollution. As early as 1947, community pressures led to the establishment of an ordinance intended to diminish smoke emissions.

In 1956, Providence enacted further regulations designed to ban the open burning of refuse and to control the emissions of soot, fly ash and certain noxious vapors and gases. In 1961, continued interest in keeping the air clean, resulted in Providence's undertaking more sophisticated techniques in assessing air pollution. Assisted by the Public Health Service, the Division of Air Pollution and Mechanical Equipment and Installations of the city of Providence conducted a "pilot" sampling study of the air. During both summer and winter, pollutants such as sulfur dioxide, nitric oxide, nitrogen dioxide and many other chemicals and compounds were measured, providing valuable information to gage the progress being made in the fight against polluted air over Providence. The identical

bills, I believe, would encourage and assist the city of Providence as well as many other communities which undertake to clean up their air. I would like to quote a few remarks by Mr. Genaro G. Costantino, the chief air pollution control officer of Providence, which appeared in the Providence Bulletin of June 5. "What can we do in Providence when residents of the North End complain about odors and fumes from the Pawtucket incinerator, just across the city line? I would be firmly in favor of a State air pollution law or code. We need it. More than that, I would like to see an area code, enforced alike by all the States up and down the coast." I concur in Mr. Costantino's views and I feel that the bill introduced by you, Mr. Chairman, will help to bring about necessary control activity by States, local agencies, and regional organizations.

Over the past few years I find myself more deeply concerned with the growth of those areas of public concern now being identified as environmental health problems. In particular, I have closely observed the growing impact of the motor vehicle on public health and safety. I note with special gratification the Surgeon General's recent report on the problems associate with motor vehicle emissions and public health as forwarded to the Congress under the direction of the Schenck Act. In many communities in New England and elsewhere throughout our country, emissions from motor vehicles represent a significant proportion of the total air contamination. It would be a vast misunderstanding of the national scope of the problem if it were thought that only Los Angeles and New York City suffer from smog associated with motor vehicle wastes.

Although there is some progress on the part of the automobile industry in the control of some emissions from motor vehicles, we are a long way from an effective solution. With the eventual utilization of a crankcase ventilating device in most motor vehicles as now promised by the industry, we can at best expect only about a 25-percent reduction of hydrocarbon emissions. Even the figure of a 25-percent reduction is not realistic, since we can expect an increase in the total number of automobiles which will offset this improvement. The remaining 75 percent of such emissions are exhausted by the tailpipe over which virtually no control is now exercised. The Federal Government, States, local governments, the automotive industry, the petroleum industry \* \* \* all share responsibility in this pressing problem which begs for solution. Therefore, I urge the wholehearted support of these identical bills. We, in the Federal Government, must provide the stimulation and leadership for the other segments of society to face their responsibilities with confidence.

I note that the new provisions in these bills pertain primarily to expanded Federal assistance to State and local governments in their control programs. I think we all stand in agreement with this policy. Thus, the bill would authorize grants to States and local governments for study and appraisal of their problems and for the development and expansion of their control programs; they would authorize the negotiation of compacts between States for cooperative effort and mutual assistance; they would authorize the detailing of Public Health Service personnel to States and local agencies on their request; and they would authorize Federal studies and public conferences on problems which are interstate or typical of problems faced by many communities. Also, the bills would provide permanent authority for the Federal Government to conduct its necessary activities toward solution of a problem which promises to be with us for a long time to come.

If we are to successfully mount a total national effort capable of meeting this problem, all of the provisions of these bills are essential to effective Federal participation. We must keep in mind that the factors responsible for air pollution problems continue to increase with our society's expanding patterns of urbanization, industrialization, and energy use. As this growth continues, more and more cities and towns will place a greater burden on the air resource, which cannot be augmented and therefore must be conserved through proper controls. It is already apparent that the air supplies available to some of our cities are overburdened with pollutants. What's more, the factors of growth which promise to further intensify the problems of air pollution will not stand still. Neither should we.

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STATEMENT OF HON. GORDON L. McDONOUGH, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA BEFORE THE COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE, ON H.R. 9929

Mr. Chairman and members of the committee, the problem of "smog," the common term used to identify all forms of air pollution, aerosols, and gases, has grown during the past 20 years in the serious nature of its effects upon human health and

well-being until it is now a problem which must be considered at the national level as of prime importance to the welfare of the entire Nation.

The United States has developed as an industrial nation with the greatest industrial growth occurring in urban areas where population expansion has taken place at an unbelievable accelerated rate.

Metropolitan areas such as Los Angeles, Calif., have doubled and tripled in population, and some smaller communities in the Los Angeles metropolitan area from which people commute to work have registered a 1,000-percent population increase since 1950.

All over the country, in areas where industrial and commercial growth has been great, the problem of air pollution has developed in proportion, and it is now a problem seriously affecting both urban and agricultural areas throughout the United States.

Because air pollution as a major threat to the health and well-being of Americans is a relatively new problem, its solution is difficult. But progress has been made, especially in the field of industry where devices to eliminate the release of air pollutants in the atmosphere have been quite effective.

In Los Angeles, the backyard burning of trash, another contributor to air pollution, was eliminated by law prohibiting the disposal of trash by the backyard incinerators.

Today air pollution experts have agreed that the one remaining source of uncontrolled air pollution—that is, the one source where no constructive action has been taken to achieve at least partial elimination—is the modern exhaust from the Nation's private and commercial motor vehicles, and this is the area where steps must be taken to control this cause of air pollution at its source, within the mechanism of the motor vehicle itself.

The State of California has recognized the need for immediate action in this field, and the California Motor Vehicle Pollution Control Board was formed in July 1960. This board has already approved nine anti-air-pollution devices which have been granted certification. After the board approves two or more devices they become mandatory on new cars sold in California after April 1963 under California law.

G. C. Hass, supervising engineer, reported that recent tests of average California cars by the California Motor Vehicle Pollution Control Board staff verifies the need to control two sources of pollutants from motor vehicles. Fumes from the automobile crankcase, if not controlled, would dump approximately 550 tons of smog-forming substance into Los Angeles air every day. Particles from the auto exhaust, if not controlled by devices, would add 1,200 tons of pollutants daily in that same city. This is indicative of the importance of the motor vehicle in smog formation in metropolitan areas not only of California but of the whole Nation.

H.R. 9929, the bill which I introduced, would prohibit the manufacture, sale, use in commerce, or the importation into the United States of any motor vehicle which discharges unburned hydrocarbons or other noxious gases in amounts harmful to human health in amounts in excess of the standards prescribed by the Surgeon General, after the Surgeon General of the Public Health Service has conducted such research as he may deem necessary to prescribe standards as to the amounts of unburned hydrocarbons and other noxious gases harmful to human health which are safe, from the standpoint of human health.

The importance of air-pollution control at all sources cannot be too highly stressed. Man can live 5 weeks without food and 5 days without water. But he perishes after 5 minutes without air.

California, at the State level, has already acted to bring motor vehicles under regulation for air pollution control. But the problem of air pollution is nationwide, and to achieve effective control of air pollution from all types of motor vehicles, regulation must also be established at the national level.

One of the fundamental responsibilities of government is the protection of the health and welfare of the people. Air pollution is a problem that will continue to mount and increase in intensity with the continuing phenomenal growth of our Nation. Delay in the establishment of effective air pollution control in all fields will only permit the problem to intensify and the danger of its effects to increase.

Action for air pollution control should be taken at the national level now. I sincerely urge that this committee give favorable consideration to H.R. 9929 at this time.

Mr. ROBERTS. I also have three telegrams for the record. One from William J. Phillips, chairman of the Air Pollution Committee of the National Association of County Officials, Orange County, Calif.

Another from David W. Bird, president, National Association of County Officials.

And finally a telegram from Paul J. Anderson, chairman, Southern California Air Pollution Coordination Council which was sent to our colleague, Hon. D. S. Saund from California and forwarded on to the committee.

These will be filed for the record.

(The documents referred to are as follows:)

HON. KENNETH A. ROBERTS,  
U.S. Congressman, House Office Building, Washington, D.C.:

ORANGE, CALIF., June 22, 1962.

We strongly support air pollution legislation now before your committee and urge you recommend adoption of this legislation.

WILLIAM J. PHILLIPS,  
Air Pollution Chairman, National Association of County Officials.

WASHINGTON, D.C., June 25, 1962.

Chairman KENNETH A. ROBERTS,  
Subcommittee on Health and Safety, House Committee on Interstate and Foreign Commerce, U.S. House of Representatives, Washington, D.C.:

On behalf of the National Association of County Officials, I request that favorable consideration be given to H.R. 10519 presently considered by your committee. We feel this legislation will provide needed stimulation toward local efforts and increased Federal leadership in the field of air pollution.

DAVID W. BIRD, President.

RIVERSIDE, CALIF., June 24, 1962.

HON. D. S. SAUND,  
House of Representatives, House Office Building, Washington, D.C.:

Recently our council gave unanimous endorsement and support to enactment of H.R. 10519 relating to Federal air pollution legislation. We urgently and sincerely request that you support and make a forceful presentation of our thoughts to the Roberts committee meeting to be held on H.R. 10519 Monday, June 25, in Washington, D.C.

PAUL J. ANDERSON,  
Chairman, Southern California Air Pollution Coordinating Council.

Mr. ROBERTS. I have also a letter from the Honorable Robert F. Wagner, mayor of the city of New York, dated June 20, 1962, which will be filed for the record.

This, I think, is a very good letter and I will read it into the record at this time.

(The letter referred to is as follows:)

CITY OF NEW YORK,  
OFFICE OF THE MAYOR,  
New York, N.Y., June 20, 1962.

HON. KENNETH A. ROBERTS,  
House of Representatives,  
Washington, D.C.

DEAR CONGRESSMAN ROBERTS: By this communication, I should like to express my strong support of your bill (H.R. 10519) referred on March 1, 1962, to the Committee on Interstate and Foreign Commerce. As mayor of the city of New York, a metropolis deeply concerned with the threat, cost and annoyance of air pollution, I regard speedy enactment of this piece of legislation as a vital step toward solving this national problem on a nationwide basis.

There are few areas in these United States outside New York City more acutely aware of the costly weight of polluted air or of the enormity of the campaign we must launch to eradicate it. The annual cost to New York State from air pollution has been estimated by the Department of Health, Education, and Welfare as approximately \$150 million. While most of this amount can be attributed to property damage in New York City alone, it probably amounts to a bare fraction of unreportable damage to the health of our citizens from all types of uncontrolled air pollution.

Since 1952, with the establishment of a department of air pollution control, this city has pursued an active program of prevention, control, regulation and research of the agents polluting our air. Our activity in this field has been constantly increasing. Last year our department of air pollution control received and investigated nearly 20,000 complaints regarding air pollution. In many cases, remedial action was taken or begun. But the sources of air pollution are, as you well know, many and often difficult to locate.

We in New York City have taken steps toward legislating for the mandatory use of blow-by devices on the exhausts of all new automobiles; we have enacted measures to curtail air pollution from open burning, industrial outlets and many other sources. We have established seven air pollution monitoring sites throughout our city and maintain a carefully organized laboratory research program into the prevention and effect of air pollution. But, even with so far-reaching a program, it is my firm belief that we are not doing all that we can and must.

Your proposed bill, which proposes further to extend and strengthen the Federal air pollution control program under the coordination of the Surgeon General's Office, is of vital importance since it recognizes the patent fact that air pollution is no respecter of State, city, or, indeed, national boundaries. Hence, it is imperative that effective coordination and policing of air pollution be undertaken on a Federal basis.

I have insisted on a program for cleaner air in New York City as a precondition for the health of this metropolis. But it will prove impossible to attain our goal of transforming the noxious fume-laden atmosphere of our cities into fresh, clean air unless we can win Federal support and action for a program that will rise above any manmade delineations of territory or responsibility.

Federal involvement in this national problem (as proposed in your bill) through financial and technical assistance will do much to arouse needed national support and awareness, effect a closer coordination of the antipollution activities of the individual cities and States, and bring closer the day when fresh air in these United States is no longer an exclusively rural monopoly.

Yours sincerely,

ROBERT F. WAGNER, *Mayor.*

Mr. ROBERTS. Now, representing Congressman Seymour Halpern, of New York, is Mr. Charles R. Foster, legislative assistant.

Mr. Foster, you may proceed with your statement.

**STATEMENT OF HON. SEYMOUR HALPERN, A REPRESENTATIVE  
IN CONGRESS FROM THE FOURTH CONGRESSIONAL DISTRICT OF  
THE STATE OF NEW YORK (AS READ BY CHARLES R. FOSTER,  
LEGISLATIVE ASSISTANT)**

Mr. FOSTER. Mr. Chairman, in support of H.R. 10615, which I introduced, and, of course, of identical bills 10519 and 11524, sponsored respectively by yourself and Congressman Corman, I should like to make two principal points. The first refers to the growing air pollution problem in my own city, America's largest. The second is based on my concern for small farmers, especially those gardeners in the suburbs and on the outskirts of all our cities.

In New York City last year, there was a slight rise in sootfall, to an average total of 68.4 tons per square mile per month; and a more substantial rise in suspended particulate matter—particles heavier than those in smoke. These increased 14 percent over the previous year, to 267 micrograms per cubic meter of air.

Under the able leadership of Commissioner Arthur J. Benline, we have an active city department of air pollution control. Under the city's program, 5,428 violation notices were issued in 1961 as against 5,077 in 1960. However, cleaning up New York's air will require concerted action throughout the metropolitan area and involving governmental jurisdictions in three States. The bills before you provide a mechanism for needed Federal leadership and assistance in dealing with this type of problem.

Of the six principal new provisions of these bills, four seem to me highly desirable: those which authorize compacts between States; detailing of Federal personnel to air pollution control agencies; Federal studies, initiated by the Surgeon General, of major pollution problems; and public conferences on such problems.

These four impress me as realistic acknowledgments of two obvious facts: the interstate nature of many air pollution problems, including those of New York City, and the availability in the Federal Government of techniques and technicians which no lower governmental level can hope to match in the near future.

The other two provide for replacement of the time and cost limitations of the current act with normal annual budgetary procedures, and for Federal grants to help State and local agencies to get more effective control programs started. These I consider not only highly desirable but also urgently necessary if our States and cities are to cope with this problem before it becomes intolerably costly, in money and in human health.

In New York City, citizen complaints concerning air pollution rose from 16,615 in 1960 to 19,534 in 1961. One can wonder how many more tens of thousands of New Yorkers chose, as most people do, to suffer in silence, whether they thought of the polluted air of their city as merely an offensive odor, as a costly soiler of their clothes and property, or as the hazard to their health which we increasingly believe it to be.

All of you have heard many times of the famous air pollution episodes in Donora, Pa., in 1948, when 20 died, and in London, England in 1952, when 4,000 excess deaths were reported in a single 2-week period.

But there is now a New York City episode, too. Discovered only recently by Dr. Leonard Greenburg and associates of the city health department through comparison of mortality statistics with air pollution levels, some 200 excess deaths among New Yorkers between November 15 and 24, 1960, 1,953 are now attributed to the exceptionally high pollution levels which prevailed at that time.

How many more such episodes there may have been, in New York and in our other great industrial cities, we shall probably never know. What we can be sure of is that there will be more and worse in the future, unless our cities and States and the Federal Government work together on this problem in the ways that these identical bills authorize.

A good example of the kind of problem which no city or State can effectively tackle alone is that of pollutant emissions from motor vehicles, which of course cross those dotted lines on our maps as freely as the wind. I was greatly impressed by the voluminous report on the possible health effects of such emissions which the Public Health Service has just submitted to the Congress, in compliance with the Schenck Act. For his initiative in this matter, Mr. Chairman, I should like to congratulate our distinguished colleague from Ohio, who I know is a most active member of your committee.

Even though the Schenck report covers only a good beginning of the necessary research in this area, it is already evident—as the Surgeon General's letter of transmittal makes clear—that automobile emissions do produce effects on human beings. There is also a clear implication here that air pollution is probably related to such serious respiratory diseases as chronic bronchitis, emphysema, and lung cancer. To conclude my point No. 1, we in New York City are going to need the

kind of Federal cooperation which these new bills provide for, in order to follow up the preliminary findings of the Schenck report and to implement these and other research results with remedial action.

My second point—and I shall make this brief—has to do with air pollution's high cost to gardeners and small farmers. Most people are surprised to learn that there are still about 50 small farms within New York's city limits, mostly in Staten Island. And we have hundreds of thousands of residents in my area of Queens who pride their home gardens. Incidentally, not too long ago, Staten Island was famous for its strawberry crops and there were scores of prosperous truck farmers and flower growers there. Even more than population pressures, the air pollution from factories and other sources has driven most of them out of business and made the livelihood of the small remainder precarious indeed.

An article by John G. Mitchell in this May's issue of *Country Beautiful* dramatizes their plight:

Year after year, primroses and pansies withered. Pine trees lost their needles. When the squash is wet, that sulfur comes down and burns them to ashes. Stunts the apples, too.

These are quotes from Staten Islanders not quite ready to give up. These effects occur not only in the cities but extend out considerable distances from them, and affect the vegetable truck crops which are important food sources to all of us. In his article, Mr. Mitchell points out that near Bordentown, N.J., 20 miles downwind from Philadelphia, the spinach and endive enterprises are threatened by ozone pollution. When he reminded one of the small farmers he interviewed that many millions of dollars have been paid out throughout the country by offending industries in damages for ruined crops, he got this answer:

I never took a penny from them and I never will. All I want is to grow things the way God intended. In the good fresh air.

Mr. Chairman, in conclusion, my remarks were concerned primarily with the danger to the urban dweller of air pollution. But air pollution affects the rural dweller who want to keep on growing things in the good fresh air, too. It is not simply a New York City problem but a national problem. I urge early favorable action on these bills so that the fight against air pollution may go on.

Mr. ROBERTS. Thank you, Mr. Foster, for your appearance in behalf of Congressman Halpern and a very fine statement.

Mr. FOSTER. Thank you.

Mr. ROBERTS. There may be some comments or questions.

Mr. O'Brien?

Mr. O'BRIEN. I have no comment, except there is one sentence in the Congressman's statement that I consider rather significant. After endorsing the bill, he says he considers these steps not only highly desirable, but also urgently necessary in our States and cities if we are to cope with this problem before it becomes intolerably costly in money and in human health.

I assume the Congressman feels that while this might involve the spending of additional money, which in the aggregate is often criticized by people, that this expenditure of Federal money actually would result in a saving in the long run because if the cities and the States were to handle that separately, in the first place, they could not, and in the second place, it would cost them a good deal more money.

Mr. FOSTER. That is exactly how he feels, Mr. O'Brien.

Mr. ROBERTS. Mr. Schenck?

Mr. SCHENCK. Thank you very much, Mr. Chairman.

I want to express my appreciation to Mr. Foster and to our good friend and colleague, Congressman Halpern, for this splendid statement. I would also like to agree with my colleague, Mr. O'Brien, from New York, that the question of loss in human health and also in vegetation and damage on many materials—paint, metal, rubber, chrome plating, and so on, is actually costly just in monetary loss, figured, I believe, at \$7.5 billion a year. It was pointed out, I think, in some of our reports that in the annual loss in agricultural products alone in some of the counties of California, it was in excess of \$3 million.

I would also like to point out, Mr. Chairman, that in a recent inspection trip I made to the Taft Engineering Center in Cincinnati, where a great deal of this research is being done and where they are receiving air samples from all over the United States, including them in their research, it was conclusively shown there that the normal amounts of automotive exhaust gases in air, especially after it was irradiated by sunlight, are tremendously destructive to any plants' leaves and vegetation, and also various other materials that I mentioned, in addition to the bad effect on human health, particularly in the respiratory tract. So I am delighted to have this fine statement from our colleague, Congressman Halpern, and I sincerely hope that this broad program of research can go forward to enable local communities to take advantage of the technical information gained, and thus determine the appropriate procedures to solve these problems.

Mr. FOSTER. I might add that Mr. Halpern in Queens lives in an apartment project called Kew Gardens, but they have not been able to grow a garden there in years because of the pollution problem.

Mr. SCHENCK. I would like to suggest to my colleague, Congressman Halpern, and you, Mr. Foster, that if you have an opportunity to visit the corner of L and First Streets N.W., here in the city of Washington, there is an air-sampling station located there which takes out of the air the normal air, whatever it may be, at various times of the day. There are some seven or eight automatic analyzers inside this station which are continuously determining and recording the amounts of the various kinds of gases in the air. This is recorded on permanent tape. This Washington station is one of eight centers nationwide. The tapes are forwarded into Cincinnati and put into a computer, through which a comparison nationwide can be made. I think you will find that this is a very interesting demonstration, and also extremely important in this overall study of air pollution.

Thank you, Mr. Chairman.

Mr. ROBERTS. I thank the gentleman from Ohio.

Mr. NELSEN?

Mr. NELSEN. No questions; thank you.

Mr. ROBERTS. Thank you, Mr. Foster.

Mr. FOSTER. Thank you, Mr. Chairman.

Mr. ROBERTS. Do we have any other statements, Mr. Williamson, any other witnesses who represent Members of Congress?

Mr. WILLIAMSON. I've had no other requests. I do not believe there are any more Congressmen in the audience at this time.

Mr. ROBERTS. This will conclude the hearing at this point, subject to further call by the Chair, which will be announced.

(Whereupon, at 10:45 a.m., the subcommittee adjourned.)

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ADDITIONAL HEARING HELD BEFORE THE  
SUBCOMMITTEE ON HEALTH AND SAFETY  
OF THE  
COMMITTEE ON INTERSTATE AND  
FOREIGN COMMERCE  
IN  
BIRMINGHAM, ALA.,  
ON  
NOVEMBER 27, 1961

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ADDITIONAL TRAINING HELD BEFORE THE  
SUBCOMMITTEE ON HEALTH AND SAFETY  
OF THE  
COMMITTEE ON INVESTIGATE AND  
CONTROL BOARD  
IN  
BIRMINGHAM, ALA.  
ON  
NOVEMBER 27, 1961

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20



## AIR POLLUTION

MONDAY, NOVEMBER 27, 1961

U.S. HOUSE OF REPRESENTATIVES,  
SUBCOMMITTEE ON HEALTH AND SAFETY OF THE  
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,  
*Birmingham, Ala.*

The subcommittee met at 9 a.m., pursuant to notice, in 109th Evacuation Hospital, University Medical Center, Birmingham, Ala., Hon. Kenneth A. Roberts (chairman of the subcommittee) presiding.

Mr. ROBERTS. The subcommittee will please be in order. Let me say at the outset that it is a distinct pleasure to be here today with my friends and neighbors in Jefferson County. We have been trying to get this group of Congressmen to Alabama for some time, and this gave us the best opportunity to come to Alabama. We are happy to be in the district so ably represented by Mr. Huddleston. We are delighted to have him with us in this meeting.

First of all I would like to introduce the members of the Health and Safety Subcommittee of the Interstate and Foreign Commerce Committee.

First, on my right is Mr. Rhodes of Pennsylvania, who has been a Member of Congress since 1948. He is especially interested in health legislation and is author of several important health bills.

Next is Mr. O'Brien of New York, a distinguished newspaperman and Congressman since 1952. I suppose Mr. O'Brien had more to do with the admission of Alaska and Hawaii than any other Member of the House.

Then on my left is Mr. Schenck of Ohio, who is the ranking minority Representative on the subcommittee. He was elected to Congress in 1951. He is especially interested in safety, both highway safety and air safety, and air pollution. He is author of the bill under which the Surgeon General is making a study of the effect of automobile fuels on health. Mr. Schenck and I have served together for about 6 years as members of the Special Subcommittee on Traffic Safety. In fact, we are the only two remaining members of that original subcommittee that was set up several years ago.

Next is Mr. Nelsen of Minnesota who was elected to Congress in 1958. He has been active in the affairs of the subcommittee. He is well known in Alabama and nationally as formerly Administrator of the Rural Electrification Authority. We are very happy to be here. We feel that Jefferson County certainly should be congratulated for having set up a study and advisory Committee on air pollution through the Birmingham Chamber of Commerce, and the Jefferson County Board of Health. We feel this is a great forward step, and it will do much to attack the air pollution problem in the Birmingham area.

I also want to thank the press, radio, and TV stations for their interest in this important problem and for their cooperation.

This is one of a series of hearings planned by the subcommittee in connection with our study of air pollution.

We have been taking air pollution measurements in this country for 25 years or so but since World War II there has been an increasing interest in this problem.

Some of this increased interest, no doubt, resulted from the wide publicity given a series of spectacular disasters attributed to air pollution.

In 1948, 20 people died and half the population of the little town of Donora, Pa., became ill as a result of smog-poisoned air. In 1950 there was a major disaster in Mexico. Then, on December 5, 1952, the city of London was stricken by a blanket of smog which turned day into night. Medical experts say that between 4,000 and 5,000 people died there in 1 week from breathing the smog-poisoned air.

As a result of the growing concern about this, Congress in 1955 set up a 5-year program giving the U.S. Public Health Service authority to study the problem. The Surgeon General was authorized to:

1. Prepare and recommend appropriate research programs.
2. Collect and disseminate information on air pollution.
3. Conduct technical research and support research by grants-in-aid or contracts with both public and private agencies.
4. On the request of local or State agencies to make investigations of specific air pollution problems.
5. Prepare and publish research reports.

A limit of \$5 million a year was set on appropriations. In 1959, the program was extended to June 30, 1964. Shortly before Congress adjourned in September, the Senate passed a bill extending the program 2 years and giving the Surgeon General authority to go into any locality and conduct public hearings on air pollution problems of more than local significance. Under existing law, public hearings are held only at the request of State or local agencies. This extension of authority was requested in 1960 by the previous administration and the request renewed this year by the newly appointed Secretary of the Department of Health, Education, and Welfare.

I have introduced a bill to make the Federal research program permanent and authorizing the appropriation of whatever funds the Congress may think necessary.

The subcommittee is interested in getting sentiment at the "grass-roots" on this before we take action at the next session of Congress.

It is generally agreed, I think, that the actual control of air pollution is a local responsibility. We could not set up and enforce an abatement program at long range from Washington.

I might say at this point in this statement that it is my conviction, and I think it is the conviction of some members of the subcommittee, that there is not enough money in the Federal Treasury for us to go into every local situation and do the whole job. We feel that the local communities must be given encouragement and must be given whatever guidance and information that we can get from widespread research. But primarily, unless there is an interstate problem such as you would have in a city like St. Louis and East St. Louis, that primarily this matter is up to the local communities and people with civic pride are going to try to do the job.

At the same time there are many ways in which the Federal Government can help, if it is felt such help is necessary and desirable.

Although a lot of time and money has been spent on research and investigations in recent years, there is still a whole lot we do not know about the problem. Most questions about the effects of polluted air on human health have not been answered but evidence linking air pollution with lung cancer and other respiratory diseases increases daily as research progresses.

Getting the answers we need to move intelligently calls for extensive research.

Research is needed to help local communities and industry take necessary steps to control air pollution. Without the facts, we are groping in the dark. We take the chance of wasting a lot of money without doing any good.

Research is a long and costly operation. Research takes not only money, but manpower and facilities. Manpower is limited. In this situation, the Federal Government can do the job cheaper than if the States and local communities go it alone. Duplication can be eliminated by a Federal program. Information can be collected and disseminated more efficiently and rapidly that way.

But it costs money. With the great demands on the Federal Government for tax dollars, is this program worthwhile?

Should the program be continued? Should it be expanded? Should the Surgeon General be given additional authority?

These are the questions that Congress will have to answer next session. And the Congress is looking to this subcommittee to make recommendations.

It is to get your counsel and advice—the counsel and advice of those who pay the bills—that we are here today.

Scientific studies leave no doubt that air pollution is a serious menace to health. There is no doubt that air pollution each year destroys crops worth millions of dollars. Statistics are tricky but we are told that the annual cost of air pollution to the United States is at least \$7.5 billion.

Recently Dr. Roger Mitchell of the University of Colorado Medical School said that in 1960 at least 60,000 people died in this country from lung ailments which probably were caused by breathing polluted air.

We are concerned, and rightly so, about the radioactive fallout from nuclear bomb tests.

But in a speech in Cincinnati the other day, Dr. H. E. Landsberg, a Weather Bureau scientist, said air pollution is more of a problem than radioactive fallout.

Declaring that city air is becoming increasingly more polluted, he said it is appalling that we are doing "nothing to speak of about it."

As stated earlier, this subcommittee has been interested in air pollution for many years. We have been interested especially in motor vehicle exhaust fumes. In this, our colleague from Ohio, Mr. Schenck, the senior Republican member of the subcommittee, has taken the lead.

In 1956, I was appointed chairman of the Special Subcommittee on Traffic Safety, which began a far-reaching study of highway safety, which is now being carried on by the Subcommittee on Health and Safety. Mr. Schenck was a very active member of the special subcommittee.

During some very interesting and productive hearings in Ohio, Mr. Schenck presented to the subcommittee as a witness Dr. Robert E. Zipf, then president of the Ohio State Coroners' Association. Dr. Zipf urged that a special study be made of automobile exhaust fumes. Mr. Schenck went into this very thoroughly and after a study of available data on the subject in 1957 introduced a bill to prohibit the use in commerce of any motor vehicle which discharged unburned hydrocarbons in an amount found by the Surgeon General to be dangerous to human health. In hearings held on this bill in 1958 leading experts in the field were heard.

In 1959, the subcommittee reported Mr. Schenck's bill to the full committee. However, the full committee was unwilling to go as far as proposed in the bill without more evidence. As a result a compromise bill was worked out to direct the Surgeon General to make a 2-year study and report to Congress on the effect on human health of motor vehicle exhaust fumes. We are awaiting the Surgeon General's report with a great deal of interest.

It is generally agreed that motor vehicle fumes are the principal cause of the smog which has plagued the Los Angeles area and other cities for some time.

Controlling the exhaust fumes may be rather difficult and expensive but if it is shown that this is needed to protect human health, I am sure our people will gladly pay the bill.

The industry, however, has developed an inexpensive installation which will eliminate crankcase blowby, which accounts for from 20 to 40 percent of the total of unburned hydrocarbons discharged into the air by automobile engines. These installations, which feed the blowby gases back into the cylinders to be burned, are standard equipment on all 1961 cars sold in California.

In 1960 this subcommittee held hearings to ask the manufacturers why these installations should not be made on all new automobiles sold anywhere in the country. The Secretary of the Department of Health, Education, and Welfare endorsed the idea and recommended that the industry do this voluntarily. The present Secretary also is urging the industry to do this.

Unless action is taken voluntarily, there is going to be a move made in Congress to require that these blowby devices be built into all new cars. You will recall that Congress passed my refrigerator door latch bill a few years back when we were unable to get the industry to develop and install doors which would not be death traps for youngsters. That law has worked out without causing undue hardship in the industry.

I have taken a great deal of time in this opening statement but I thought my friends and constituents here should know something about our problems and why we are in Birmingham today.

I am sure the testimony which will be received here today will be very informative and helpful. We cannot, of course, hear all of those interested in the limited time at our disposal but on behalf of the subcommittee I invite anyone interested to write me. Your views and suggestions will be helpful.

I would like at this time, without objection, to place in the record a résumé which gives the status of the Federal air pollution program at the present time.

(The statement referred to follows:)

#### STATUS OF FEDERAL AIR POLLUTION CONTROL PROGRAM

Established by Public Law 159, 84th Congress (approved July 14, 1955), which authorized the Surgeon General to—

- (1) Prepare and recommend research programs designed to reduce or eliminate air pollution.
- (2) Collect, publish, and disseminate information.
- (3) Conduct technical research in the Public Health Service and to support by grants or contract technical research by private or public agencies.
- (4) To investigate and make surveys, on the request of State or local government agency, of air pollution problems.

The program was authorized for 5 years and appropriations limited to \$5 million a year.

In 1959 the act was extended 4 years, making expiration date June 30, 1964.

#### PENDING LEGISLATION

S. 455 (passed by the Senate September 20, 1961). This would—

Extend program 2 years.

Retain \$5 million annual ceiling on appropriations.

Authorize Surgeon General, on his own initiative, as well as on request by State or local agency, to hold public hearings on a problem "if, in his judgment, such problem may affect or be of concern to communities in various parts of the Nation or may affect any community or communities in a State other than that in which the matter causing or contributing to the pollution originated."

H.R. 3082 (by Mr. Roberts) would make Federal research program permanent and remove ceiling on annual appropriations.

Other pending bills on air pollution: H.R. 747 by Mr. McDonough; H.R. 2948 by Mr. Shelley; H.R. 3577 by Mr. Roosevelt; H.R. 9347 by Mr. Halpern; and H.R. 9352 by Mr. Corman.

Mr. ROBERTS. I would like especially to call attention to the bill which passed the Senate in the last session, September 20, 1961, S. 455.

Briefly, this bill would extend the present program 2 years. It would retain the \$5 million annual ceiling on appropriations. It would authorize the Surgeon General on his own initiative, as well as on request by State and local agency, to hold public hearings on a problem "if, in his judgment, such problem may affect or be of concern to communities in various parts of the Nation or may affect any community in the State other than that in which the matter causing or contributing to the pollution originated."

On the House side I have introduced H.R. 3083 which would make this research program permanent and would remove the ceiling on annual appropriations leaving that matter up to the Appropriations Committee.

There are other bills pending in the House on this matter.

That concludes the opening statement. With leave of the committee I would like to file S. 455 and H.R. 3083 in the record at this time.

(The bills mentioned, H.R. 3083 and S. 455 may be found on p. 3 and p. 9, respectively.)

Mr. ROBERTS. Our first witness today is Hon. George Huddleston, Congressman in this district. George, we are delighted to be in your district today. We are glad to have you. You may proceed as you desire.

**STATEMENT OF HON. GEORGE HUDDLESTON, JR., A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ALABAMA**

Mr. HUDDLESTON. Thank you, Mr. Chairman. It would be presumptuous on my part, in view of the splendid array of witnesses that Birmingham and Jefferson County have prepared to present to the committee this morning, for me to take up any prolonged time to give a statement dealing with this very technical and crucial problem.

We in Birmingham are very happy to have the committee with us this morning. We feel a great deal of good can come from this committee. Many of our people here in the community have spent long hours in studying the problems which our air pollution in Birmingham has created. The various witnesses will go into that in more detail as they appear before the committee.

As the Congressman from this great industrial district of Jefferson County, I want to personally welcome the committee and tell you we are glad to have you with us. We hope that you will stay with us as long as you can, and we are confident that a great deal of good will come from the facts which will come out as the committee hearing progresses.

Thank you, Mr. Chairman.

Mr. ROBERTS. Thank you, Mr. Huddleston.

I believe I will call as the first witness Dr. Prindle, of the U.S. Public Health Service, who will tell us something about the problem as he finds it over the country.

**STATEMENT OF DR. RICHARD A. PRINDLE, DEPUTY CHIEF, DIVISION OF AIR POLLUTION, U.S. PUBLIC HEALTH SERVICE**

Dr. PRINDLE. Mr. Chairman, members of the subcommittee, ladies and gentlemen, first I would like to introduce Mr. Jean J. Schueneman, Chief of our Technical Assistance Branch, who will also testify, by leave of the committee, later.

I wish to introduce myself. I am a regular corps commissioned officer in the Public Health Service, a career man who has served in the Service for approximately 10 years, the last four and a half in the air pollution field.

Mr. ROBERTS. Dr. Prindle, will you raise your voice, please?

Dr. PRINDLE. I have served over the last year as the Deputy Chief of this Division. I attended schools in Louisiana, graduated from the Harvard Medical School in 1948, interned at the Columbia Presbyterian Medical Center in New York City, returned to Harvard as research fellow, joined the Public Health Service, and later received my master's degree in public health at Harvard in 1954. I joined the air pollution activities approximately four and a half years ago as the epidemiologist for the then existing air pollution medical program, subsequently became its Chief, and when it was combined with the engineering program in the present Division, acquired my present status.

It has been almost 2 years since we have had the opportunity of presenting to you our activities, and a good deal has happened. I plan today only to hit the highlights very briefly to give you some idea of what we have been doing, and go into greater detail at a later time if the committee desires.

I think perhaps the most significant thing which has happened since we met last was the recognition by the Public Health Service of the importance of this activity and the combination thereby of what was then existing as the air pollution engineering program and the air pollution medical program, two separate branches within the Service, to form a structure of greater organizational significance: A Division of Air Pollution. This combined these two activities, and instead formed five branches which more nearly corresponded to the kind of activities which we were conducting. These branches include the Field Studies Branch, which undertakes research in the field of problems in various cities and areas; the Technical Assistance Branch, of which I will speak later; the Laboratory of Medical and Biological Sciences, which conducts laboratory research in the biological effects of air pollution, not only on humans but animals; the Laboratory of Engineering and Physical Sciences, which conducts the chemical, engineering, and instrumental research, and a new Branch of Research Grants and Training, of which I will speak later also.

We have continued to accent research as our major activity and have continued to expend a budget which is primarily in the research area. We have continued a very close relationship with other Federal agencies. As you gentlemen recall, it was originally planned that the Public Health Service would act as the focus for all Federal activities, and we still continue to work with other agencies through contracts and other arrangements with such groups as the Weather Bureau, the Bureau of Mines, and the Bureau of Standards.

Most recently, in the reorganization of the Public Health Service, which has recognized more and more the environmental problems, of which air pollution is one, we have acquired authority for research grants. Actually our program has always had this authority under Public Law 159, but administratively we have transferred the funds to the National Institutes of Health for handling. This has now been changed back to our bureau and we now program and work directly in the research grants field, and in the training field. These latter grants are for fellowships and traineeships. Thus we have this new Branch of which I spoke.

Our major activity for the past year has really been the acquisition of an appropriate staff and facilities to carry out the charges which the subcommittee has placed upon us, specifically in relation to Public Law 493 on automobile emissions.

I especially wish to call your attention to the fact that, particularly in our Cincinnati laboratories at the Robert A. Taft Sanitary Engineering Center, this expansion has required us to lease additional facilities and other buildings to expand our activities. It would be our hope that this subcommittee at some appropriate time might visit us there and see the kind of work that is being done.

Now, specifically in regard to our program activities over the past few months, we have continued, of course, our national air sampling network. This, as you will recall, is a series of stations, actually there are 147 in urban communities, 36 in rural, in which samples of the air are obtained with the cooperation of, and, in coordination with, the city and local governments to assay over a long period of time the changes and fluctuations and degree of air pollution by area.

At this point we have passed the 30,000 mark, and the number of samples that have been collected in this rather monumental task

has burdened us with a good deal of paperwork. We are now attempting to get out a publication bringing up to date the previous publication of these samples. I might add that this network has most recently also been involved in assisting our Division of Radiological Health in the present fallout problem, since the nature of our air sampling is peculiarly adaptable to the problems of radioactive iodine and similar fallout products.

In research in meteorology, I think the most significant development has been that of a forecasting network which covers all the States east of the Rockies. With this network it is possible to attempt to predict inversion weather phenomena over areas of the country to alert cities, localities, and industries to the potential buildup of an air pollution problem. Many local areas and industries make use of this forecasting network in order to ascertain the changes of air pollution that result from the effects of weather. At the same time, we have been conducting a good deal of research attempting to ascertain the trajectory or the lines upon which pollutants are dispersed, and have developed a specific balloon known as the tetroon, which is being used to follow these pollutants over long areas by radar or visual observation. Also, we have formed a precipitation network which measures rainfall and the pollutants that are washed out thereby, partially in an attempt to ascertain how important rainfall or snow may be in helping cleanse the air.

We have continued work on control devices, and working with the city of New York, have been working on the problem of incinerators in apartment houses and similar areas, and have developed now an incineration mechanism which will considerably alleviate the situation. Working with the Bureau of Mines, we have conducted considerable research on the removal of sulfur dioxide, a very common, almost worldwide pollutant, a problem which is extremely severe in that ordinary removal methods have not been successful in getting rid of this gas. We have been working with the Bureau of Mines on absorbents which might remove this and which might be economical and feasible of application.

Similarly, in our instrument research, our main emphasis has been on the building of a simulator, in this case one to simulate driving patterns so that we can conduct, in the laboratory, research tests on automobile driving patterns that would give us the type of exhaust that might be found from a taxi, from an automobile, or from a delivery truck, under various circumstances. Our chemical research has been primarily on complex photochemistry, attempting to better identify those problems that arise as a result of pollutants mixing in the atmosphere, being acted on by the sunlight, and changing their characteristics.

Our Field Studies Branch has been most active. I think most of you gentlemen are aware of the fact that we conducted a rather major study in Nashville approximately 3 years ago. Reports from that have come out now in the last couple of years, and specifically I think I should mention one which is a study of anthracosis, which is the degree of blackening found in the lungs of people when an autopsy is conducted. This blackening is attributed to the inhalation of soot. This study, using autopsies from the Vanderbilt Hospital, essentially proved what one would surmise, but it is necessary to do this type of "proof" research: that the degree of this anthracosis was directly

correlated with the length of residence of the people in the air-polluted areas, that those who lived outside the area did not have this degree of blackening, and hence one can make an actual measure of the amount of time an individual had lived in the polluted area. It serves somewhat as an index of the degree of exposure of an individual at death.

At the same time, in these studies, we were able to show that patients who had asthma had more attacks of their asthma if they lived in certain areas of Nashville in which the air pollution was high. The air pollution in this case was measured as sulfur dioxide, and in those areas with high sulfur dioxide levels over a period of a year, those patients who had asthma had more attacks than those living in cleaner areas. The same was true on a daily variation basis: those days in which the sulfur dioxide was high were the days on which there were more attacks of asthma.

A group of industrial workers under the direction of Dr. Dohan of the Radio Corp. of America has done studies recently, reporting on absenteeism in an industry having a series of plants manufacturing electronic products in various cities. He was able to show that absences due to respiratory disease in these cities was directly correlated with the amount of sulfates present in the air. This work is continuing now.

Most recently, in an area of Pennsylvania, in which we were fortunate enough to find two small villages quite close together, and in which pollution was present in one village, we conducted extensive pulmonary function tests utilizing rather exotic, in some cases, devices, and were able to show that the people living in the polluted town had a higher degree of airway resistance, or pulmonary resistance, which in a sense is a measure of the difficulty of breathing against this air pollution.

To add to the chairman's list of acute disasters, Dr. Leonard Greenberg of New York City has reported that he has evidence of 200 excess deaths occurring in a period of approximately 10 days in New York City as a result of a smog episode some years back.

Finally, statistical research along these lines has shown that the disease known as emphysema, which is a very debilitating chronic pulmonary disease, often leading to death, and certainly leading to a considerable amount of disablement, has increased four to five times in the past 10 years on a nationwide basis. It is also obvious that it is highest in the large cities, and again on this basis perhaps connected with the air pollution problem.

In our biological research in the laboratory we have conducted work on vegetation, and have been able to show that there are several types of damage that can be attributed to the automobile exhaust type of air pollution. We are now attempting to define more specifically these types of damage so that they can be better cataloged on a nationwide basis. At the same time we have been exposing animals to automobile exhaust and have been able to show that there is no question that with exposure to levels approximately twice that found in Los Angeles the animals have more difficulty breathing, that their activity is tremendously diminished and that changes in their enzymes and biological structure, the exact meaning of which we do not know, are definitely abnormal.

It is interesting to note that the exhaust which has been irradiated by artificial sunlight is more damaging by these measures than non-irradiated exhaust.

Dr. Paul Kotin, of the University of Southern California, has been conducting work in relation to cancer and the probability of automobile exhaust contributing to this. As you gentlemen may recall, some years back he reported that exposure of animals to a mixture of ozonized gasoline, which is somewhat like artificial smog, produced tumors in the lungs. These tumors were not real cancers, but they were real tumors in the mouse lungs. Most recently he has been exposing his animals first to the virus of influenza. After their recovery he has exposed them to the automobile exhaust or ozonized gasoline, and these have developed true squamous cancers, which are similar to those found in human beings in lung cancer cases.

In order to pursue this further, then, and under the authorization of Public Law 493, we have developed several colonies of animals in Los Angeles and in Detroit in which we have animals in various areas, including literally in the center of the freeway, which are exposed to the atmosphere present in that area, and another matched group right alongside who are receiving clean, washed, filtered air for comparison purposes.

In the cancer field I might mention specifically that we have been developing analytic techniques for the measurement of certain carcinogens, as they are called, particularly the one known as 3,4-benzpyrene, which we believe may be an index substance of this type of cancer-causing agent.

We have sampled the air of 103 cities and 29 nonurban areas in the United States. This compound was demonstrated in all areas. The lowest levels generally occurred in western cities, the highest levels in eastern and midwestern sections of the country. Levels for cities averaged 16 times those found in nonurban areas. The levels of individual cities varied considerably, ranging from as low as those observed in nonurban areas to 150 times as great. In addition, in an especially intensive study of nine separated cities, it was observed that 3,4-benzpyrene in the air varied by season, being up to 20 times higher in the November-January period than in the summer months. It was estimated the average quantity of benzpyrene inhaled by persons exposed for a year ranged from one-tenth of a microgram in a State forest to 150 micrograms in one city.

By comparison it is estimated that a person smoking one pack of cigarettes daily for a year might be exposed to 60 micrograms, or halfway in between these two figures. Thus, a person breathing the air of some cities over a year's time might inhale as much benzpyrene as from smoking two packs of cigarettes daily.

Now, in regard to automobile exhaust research specifically, aside from carbon monoxide, the other pollutant emissions from the automobile include hydrocarbons and oxides of nitrogen, which react photochemically in the atmosphere to produce the eye irritating, vegetation damaging, visibility reducing smog. This occurs in various cities throughout the United States, and cannot now be considered unique to Los Angeles. Efforts by industry and Government have been devoted to the control of constituents of automobile emissions which have been shown to be associated with these types of smog. The greater part of this effort has been directed toward reducing

hydrocarbon emissions. Gasoline powered vehicles have a number of unclosed vents through which such pollutants can escape to the atmosphere; namely, the exhaust pipe, carburetor vent, the gas tank vent, and crankcase vent. Except under certain conditions hydrocarbon emissions by direct evaporation from the system constitute a relatively minor portion of the total. The bulk of the hydrocarbon emissions from the automobile come from the engine exhaust. Several devices are currently under development which would make more complete the combustion initiated in the engine with the aim of converting the hydrocarbons in the exhaust stream into carbon dioxide and water.

There are two types of afterburners, that which promotes oxidation of the pollutants by contact with catalysts and those which oxidize by direct combustion. One type of catalytic unit operates in a relatively low temperature range, and while it can effect a reduction in the hydrocarbon in the exhaust, has no effect on carbon monoxide. Another type employs a high temperature catalyst and is generally effective in removing carbon monoxide as well. All these afterburners require several minutes of engine operation before the catalyst reaches the required temperature. Therefore, they have the drawback that since many automobile trips are rather short in duration, these burners are not efficient over the first few minutes and, therefore, not solving the problem during the first few minutes of operation. The effectiveness of these catalysts is also decreased because they become poisoned by the lead and other compounds added. These factors combine to reduce the efficiency of a catalytic afterburner. At the present state of development it appears possible to obtain an efficiency of approximately 70-80 percent removal for about 12,000 miles of car operation. Large scale production of such afterburners involves solution of engine problems, including miniaturization and selection of durable materials. There are also odor problems associated with these.

The direct flame afterburner is simple in principle, but the design of an effective device is complicated by the extremely variable conditions of the exhaust itself. One device under development provides rather precise heat conservation and the control of auxiliary air for combustion, and thus avoids the requirement for supplemental fuel. Others require addition of a certain amount of fuel in order to keep them going. These direct flame afterburners become efficient and operate very soon after the engine is started. They have an overall efficiency up to 90 percent in burning hydrocarbons and carbon monoxide and this should not decrease over a period of time. Industry representatives advise us that the cost of production of direct flame afterburners will be affected by the difficulties of miniaturization and by the requirement for use of materials capable of withstanding the very high temperatures developed.

Recent realization that gas escaping from the crankcase vent, while small in volume, contains hydrocarbons up to one-third of the total emitted from an automobile has focused attention on a means for their control. Simple and inexpensive devices can be installed to vent the "blowby" gas to the intake manifold for combustion in the engine. Such devices will not affect the gases from the exhaust pipe which still remain the principal source of pollution. Unless blowby losses are suppressed, however, the reduction of smog-forming hydrocarbons from the automobile can never be more than 60 percent.

The automobile industry has reported the cost of blowby devices will vary anywhere from \$5 to \$25.

The cost of such a device on a car currently in use might be somewhat greater, that is, on an old car. Informal advice from industry representatives indicate a current estimate of approximately \$200 for a direct flame afterburner installed in a new car, and approximately \$100 for a catalytic afterburner. For installation on used cars, all these costs might be somewhat higher.

As to our future activities, our accent now is less on research. This is not exactly what I wish to say. Instead, our accent is to add to it more training and technical assistance activities because we now believe that in the almost 6 years of activities of the Public Health Service, the research has produced enough information that certain activities can be carried out now, although the solution of some problems is as yet to be reached. Therefore, we intend, and hope, to concentrate our activities more on training of personnel, not only for ourselves but for States, localities, and industry, in air pollution control, and the provision of technical assistance to the States and localities. We recognize that it is the right of the States and localities to control their air pollution problems. We hope that they recognize that this right carries with it a responsibility.

I wish to point to Mr. Kennedy's message on natural resources in which he accented the severity of the air pollution problem and expressed his hope that that the Federal Government might exert the leadership necessary, through training and research and through provision of technical and financial assistance to the States and local governments to help them in their control problem.

Department of Health, Education, and Welfare spokesmen have said, similarly, that it would be their hope that a legislative development might occur, such that it would enable us to provide financial assistance through grants-in-aid to States and local governments. We believe, in short, the majority of the problems are soluble and that the States and localities must take the responsibility.

Now, since technical assistance is such a major part of our future plans, and also since some of the activities of technical assistance bear on the Birmingham problem, if I may, I would like to have Mr. Jean Schueneman, Chief of our Technical Assistance Branch, speak with you briefly on this subject.

Mr. ROBERTS. Fine, Mr. Schueneman.

**STATEMENT OF JEAN J. SCHUENEMAN, CHIEF OF THE TECHNICAL ASSISTANCE BRANCH, DIVISION OF AIR POLLUTION, PUBLIC HEALTH SERVICE**

Mr. SCHUENEMAN. My name is Jean Schueneman, Chief of the Technical Assistance Branch of the Division of Air Pollution of the Public Health Service. We have our offices at the Robert A. Taft Sanitary Engineering Center in Cincinnati. We are part of the general Division of Air Pollution headed by Mr. MacKenzie and Dr. Prindle. I have been with the Public Health Service air pollution program for 6½ years, since the time of its inception in 1955. Our principal mission is to provide technical assistance and consultation to State and local governments, generally upon their request, in study

and solution of air pollution problems through some sort of governmental control program.

This work is done not only by the technical assistance branch but, also on occasion, by representatives of the research groups in the program, who have specific and detailed knowledge or interest beyond that available in our branch. The same type of work is also done by regional representatives of the Public Health Service, who are located in regional offices. The one in this particular region is headquartered in Atlanta, Ga. In three of the Public Health regions, New York City, Chicago, and San Francisco, we have a specific representative for air pollution purposes. In other Public Health Service regions personnel assigned principally to other work do as much as they can on the air pollution problem, in providing assistance to State and local government.

Our assistance has taken several forms. Perhaps the most extensive activity has been to make statewide surveys of air pollution problems. These surveys are conducted to help the States concerned determine what their air pollution situation is, and to help them develop some sort of program for combating those problems that are found. Such surveys have been done in Minnesota, Pennsylvania, Florida, New York, Tennessee, Washington, North Carolina, Texas, and Connecticut. We are presently conducting surveys in Georgia and South Dakota, and will begin a survey in Colorado early next year. We also assisted the States of Illinois and California in conducting surveys, principally done by those States themselves.

We also assist cities and other local jurisdictions, be they county or otherwise, in conducting surveys of air pollution situations. These are done for the purpose of getting a preliminary description of the air pollution problem, examining the resources available to combat the problem, examination of legislation in existence, and with this information, then, in cooperation with the cities involved, we develop a proposal for further activities to combat the air pollution problems that have been found to exist. Such surveys have been done in Portland, Oreg.; Steubenville, Ohio; Birmingham, Ala.; Charleston, S.C.; Lynchburg, Va.; Elmira, N.Y.; Hamilton, Ohio; and Washington, D.C.

Another type of study that we conduct cooperatively with local agencies or in cooperation with a State agency, is the short-term demonstration air quality measurement program. These usually consist of measurement of five gaseous pollutants and measurement of particulate pollutants for a period of 1 to 3 weeks. The purpose is to demonstrate to local personnel the techniques and equipment used for making air pollution measurements, to get some preliminary, very limited data on the air quality in the community, and to draw public attention to the existence of air pollution in that community. These studies have been done in Fresno, Calif.; Tucson and Phoenix, Ariz.; Washington, D.C.; Providence, R.I.; Atlanta, Ga.; Lynchburg, Va.; Birmingham, Ala., and Minneapolis, Minn.

We have also assisted the city and county of Denver in the conduct of such a survey, and presently are making plans to conduct such surveys in Richmond, Va., and Spartanburg, S.C.

We have participated in what we call major field studies. These are ones in which we seek to develop extensive and detailed information concerning air pollution in specific communities. These have research

aspects in that we try to find out some basic facts that can be used, or will be useful nationally, but at the same time provide information to the local governmental jurisdiction in the understanding and control of the air pollution problem. These are complex studies and could cost as much as a half million dollars. Others are more limited and may cost around \$10,000 apiece. Such studies have been conducted in Nashville, Tenn.; Louisville, Ky.; the New York-New Jersey metropolitan area. In the Washington, D.C., area we have such a study underway.

A study has recently been completed in Jacksonville, Fla., and reports are being written. The same is true of Berlin, N.H., where a study has been done and reports are being prepared. A study is presently in progress on an interstate air pollution problem involving Lewiston, Idaho, and Clarkston, Wash. This one is of considerable interest because of the administrative aspects of the situation as well as the technical aspects. We also participated, in cooperation with the State Department and the International Joint Commission, in the study of air pollution in the international Detroit-Windsor area, and also worked with the people in El Paso, Tex., concerning their air pollution problems and some of the international aspects between El Paso and Juarez, Mexico.

State and local governments have difficulty finding time to read the extensive literature that is produced in the air pollution field, and also have difficulty even getting access to this literature. We therefore provide a technical information service summarizing new publications, so that information can be made widely available for use of State and local agencies. Typical examples have included a compilation of all the air pollution analyses that have been made, and a listing of air pollution literature published in journals, and elsewhere, in cooperation with the Air Pollution Control Association and the Library of Congress. Abstracts are prepared and published monthly and go out with the Journal of the Air Pollution Control Association.

We have recently under preparation a comprehensive survey of all the information available on the air pollution aspects of the iron and steel industry. This is presently being reviewed by the American Iron & Steel Institute and by several major steel producers. Similar reports on the air pollution aspects of certain other industries, including coffee roasting, cement production, combustion of oil, and combustion of coal, are being prepared.

Also, by way of technical information, we answer literally scores of letters from people of all sorts: industrial representatives, State and local government employees, private citizens, Congressmen, and anyone else who asks. We prepare letter reports and information on any question in the field of air pollution that may arise. In view of the lack of technical knowledge sometimes we have to send back some pretty weak letters, but we do the best we can to tell folks all we know.

Another important aspect of our technical assistance work is the training activity. At the sanitary engineering center, in Cincinnati, short-term courses which are essentially at university postgraduate level are conducted for anyone who wishes to attend, without cost. These courses deal with the measurement of pollution, control of pollution, the effect of pollution on vegetation and health, measurement of dispersion through meteorological studies, and so forth. We

conduct about fifteen 2-week courses per year at the center, usually on about 12 different subjects. We conduct a few courses in the field, usually in cooperation with a university, making use of their campus, and perhaps some of their instruction staff. We conduct about five of what we call orientation courses per year. These are 2-day courses that are conducted in the field, in a given community, directed at the general public, members of the chamber of commerce, school-teachers, public officials, and so on, and covering very briefly in a general sense the whole air-pollution field.

This training activity is also supported by grants, as mentioned by Dr. Prindle, to universities and to individuals, so that they may return to school for additional training to supplement that which they already have. We also provide a wide range of general support and consultative services to public or private agencies, and this may involve field visits or answers of letters or people coming to our center. One such case recently concerned Selma, Ala., where a phosphate rock fertilizer plant was causing some trouble. One of our staff visited Selma and made a report to the State health department, setting forth such information as we could develop in a brief study.

If the committee wishes, I can make some comments on the air pollution situation in Alabama as indicated by information I have at present. Would you like such information?

Mr. ROBERTS. You may proceed.

Mr. SCHUENEMAN. Our association with the air pollution situation in Birmingham goes back perhaps to 1957. We have had various activities going on in the community. We have noticed in the newspaper, and have had reported to us by local officials, several occasions where numerous houses have been turned black by the action of hydrogen sulfide on lead pigment paints. Particular instances are recalled from the records, one in February of 1960, when about 40 houses were involved, and a similar incident in April of 1961. We notice in the community some evidences of soiling of buildings by blackening, especially up under the eaves and in art work on buildings. Soiling of these buildings is evident and you can see as you go about evidences of considerable dust fall: just plain dirty window sills and venetian blinds. We at one time spoke to nurserymen in the area concerning raising plants in this community. Some indicated that they had some difficulty in raising some species of plants in some parts of town. These are particularly the evergreens. They don't seem to do too well in some parts of town.

Our first effort to find out something about the air pollution problem in Birmingham was to conduct a survey in cooperation with the Jefferson County Health Department and City of Birmingham Department of Public Improvements. This survey was done in 1958, and consisted of a preliminary appraisal of the air pollution situation in the community and the preparation of recommendations, general recommendations, as to what might be done in the future. These recommendations were prepared cooperatively with the agencies involved.

This report has been made widely available in the community. More recently, in June and July, again in cooperation with the local agencies concerned, we initiated some moderately extensive air pollution measurement work for a 3-week period; we made measurements of hydrogen sulfides, sulfur dioxide, nitrogen dioxide, nitric oxide and

oxidant, at principally one location in downtown Birmingham. Some of the measurements were also made in other areas.

From these measurements, made at a time when we would expect pollution to be quite low, since this was summertime—there was no space heat going on and meteorological conditions for blowing away pollution were generally good—we found that there were some indications of pollution levels of concern. The suspended particulate matter, the dust floating in the air, was found to be more than 150 micrograms per cubic meter on several days, which is higher than would be desirable.

We found evidence of soiling by the atmosphere using a measurement made by drawing air through filter paper. The degree of blackness indicates the amount that the atmosphere is likely to soil surfaces. Some of the values for this measure of pollution were found to be higher than desirable. Dust falling on surfaces was found to be excessive in some residential locations, with values ranging as high as 90 tons per square mile per month. We usually feel 25 tons per square mile per month is a desirable level.

We did record some measurements of oxidant, which is an index of photochemical smog that is usually associated with the reaction of hydrocarbons and nitrogen oxide in the atmosphere. We have found some oxidant present, indicating that this type of photochemical smog is present to a nominal, rather low level during the summer season.

This work is going to be extended. An additional 3 weeks of study will be done in Birmingham in cooperation with the Jefferson County Health Department beginning today. Our men arrived in town this morning, and equipment came in last week. Mr. Guy Tate, who is here working with Dr. Dennison, is our principal coordinator in this work, along with a representative of Mr. A. T. Waggoner's office; that is, the commissioner of public improvements for the city of Birmingham.

The National Air Sampling Network has operated in the city of Birmingham since 1957 in cooperation with the Jefferson County Health Department. We find that suspended particulate matter, as indicated by the National Air Sampling Network samples, is higher than that of many communities. Of 48 particular communities selected for 1 analysis of the data, only 7 cities had more suspended particulate matter than Birmingham during the winter season. For the year-round average 12 of these 48 cities had more suspended particle matter than Birmingham.

Mr. ROBERTS. Would you list those cities for the record, Mr. Schueneman?

Mr. SCHUENEMAN. The 48?

Mr. ROBERTS. The 12.

Mr. SCHUENEMAN. The 12 that have more?

Mr. ROBERTS. Yes, sir.

Mr. SCHUENEMAN. Yes, sir, I can do that.

Dr. PRINDLE. We can provide this later.

Mr. ROBERTS. All right, you may supply it for the record.

(See p. 55 for information mentioned above.)

Mr. SCHUENEMAN. These are not all the cities in which we have made measurements. They were selected for a particular purpose of making certain analyses of the National Air Sampling Network data.

Mr. HUDDLESTON. That is 12 out of the 48 in this particular study.

Mr. SCHUENEMAN. Yes, sir.

This generally would indicate that Birmingham has an elevated level of suspended particulate matter. In these 48 cities, of course, are included a number of cities that are considerably smaller than Birmingham, and you would generally expect them to have lower concentrations. A number of cities smaller than Birmingham, however, actually have more pollution. So, size is not the only index of pollution.

Dr. Prindle has mentioned the study of carcinogenic material in the atmosphere. Birmingham was one of the cities involved in that study, and it was found that benzpyrene concentrations were, during the period of study, higher than in other cities where measurements were made.

A study was made of air pollution levels in Birmingham after and during a steel strike that occurred in 1956. We measured concentration of 184 micrograms per cubic meter of suspended particulate matter in the air at several locations in Birmingham after the steel strike, and during the steel strike we measured 128 micrograms per cubic meter. This would indicate that the steel industry makes some contribution to the pollution of the air in Birmingham, although certainly it is not the only source of pollution.

Insofar as comments as to what might be done in the future, these are pretty well embodied in our joint report of 1958, and still seem fairly reasonable. They include suggestions for work that could begin almost immediately to abate certain sources of pollution which are obviously unnecessary and cause local nuisances. There are a number of these. There is also a need for an emission inventory. This is a listing of all the pollution that is emitted to the atmosphere from all kinds of sources, so that one can tell which sources emit how much pollution, and, therefore, from this determine what kind of abatement action would be most advisable and in the general public interest.

There probably should be some monitoring of air quality on a continuing basis. The amount of monitoring we will be able to do in cooperation with the county health department and department of public improvements, at this time, will be very limited, and introductory. There is a need for continuing measurement of this kind.

There is a need for countywide land-use planning so that the people who make pollution are separated as best can be from people who are affected by pollution. As I recall, this is not being done, and individual communities do their own land-use planning. One community may put its pollution sources on its east edge and the adjoining community put its best housing area on its west side, and thus locate together the pollution sources and the people, in immediate proximity to each other. This makes it necessary to go to more extreme measures of control in order to ameliorate neighborhood pollution nuisances. We feel that there is a need for strengthening the existing smoke abatement law, or to perhaps replace it with a countywide air pollution control regulation or law, and perhaps a need to take some action concerning the use of high-volatile coal in firing equipment for which it is not suitable.

There is a need, too, for preventative action so that, as new installations are built which might cause air pollution, some government agency would see that these are built in such a way that they will not

cause trouble in the future. This might be by a system of issuance of permits for new construction or modification of existing facilities.

I think that about concludes my remarks.

Dr. PRINDLE. This concludes our testimony. We are open to any questions.

Chairman ROBERTS. Thank you, gentlemen.

Mr. NELSEN. Has there been any study made on perhaps an attachment that could be put on these large smokestacks of industrial facilities that would reduce the amount of material that would go into the atmosphere.

Mr. SCHUENEMAN. Generally speaking, there are air pollution control devices available that will collect any particulate matter emitted from either combustion operations or processing operations. In a few cases we consider that these are still undesirably expensive, and we would like to see better devices, more efficient devices, available at lower cost. Some research is going forward in this field. There are also other techniques, through process changes and through change of materials, which can eliminate or much reduce the emission of particulate material.

Mr. NELSEN. We have seen, for example, black smoke emerging from a large smokestack in an industrial plant. I have often wondered, when you talk about an afterburner on a car exhaust, there might be possibly something definite that would be set in motion during this period when this tremendous amount of carbon emitted to burn it up.

Dr. PRINDLE. In many cases a lot of this could be avoided by better combustion practices in the first place. In the second place there are many devices, ranging from electrostatic precipitators to literally running the air through a water bath and scrubbing it. Various kinds of dry filters are used and, actually, there are afterburners in use in industry in certain types of stacks for certain types of firings.

Chairman ROBERTS. I think, gentlemen, the Chair would like to suggest for the reporter's convenience that we question Dr. Prindle first, and then Mr. Schueneman.

It is going to be confusing here if we get in a crossfire, I am afraid.

Dr. Prindle, going back to your testimony, and I might say it is highly technical nature and it is rather hard for me to follow it, but I do thank you for your statement. I would like to know this: Would you explain to us what is your procedure for measuring pollutants in the various cities where you take samples?

Dr. PRINDLE. Sir, there are a very large number of ways. The simplest and the one we have employed most frequently is dust fall, which is a measurement made by taking a can or device in which the pollutants fall. Over a period of time this is then weighed and the amount of material collected is assayed. For example, in our study in Nashville we had some 128 of these devices. They are very inexpensive. Over a 30-day period you collect the amount of material which has fallen out of the air.

To move a little further, while we are talking about these particle-type collectors, Mr. Schueneman mentioned one in which air is drawn through a filter paper. In our national air sampling network what we have is a small electric pump that pulls air through a filter approximately 8 by 11, I believe, either paper or fiber glass filter, and

this runs for a period, usually 24 hours, collecting the solid material. This, then, can be chemically assayed, weighed and measured for the type of pollutants that are present. There are other types of devices that carry this on further.

At the same time none of this measures perhaps some of our more important pollutants, the gaseous materials. These have been the most difficult. Simple devices have existed, of which the most simple is what is called a lead peroxide candle, essentially a piece of gauze infiltrated with lead peroxide. The sulfur present in the air reacts with this. At the end of a period of time we can measure the amount of lead sulfide that is present. This gives us some measure of sulfur dioxide and other pollutants. This is rather crude, but it can be used.

Moving a little further we can bubble the air through a liquid which traps the particular chemical we are interested in. These liquids are shipped back to our laboratories and assayed by various chemical techniques for the specific gaseous pollutants in which we are interested. Finally, there is chemicoelectric equipment that will measure some of these over very brief periods of time, automatically and simultaneously. We have just launched, again as part of our major studies, an eight-city study for gaseous pollutants in which we have placed this expensive electronic type of equipment for the assay of some seven or eight gaseous materials, including carbon monoxide, sulfur dioxide, oxidants, ozone, nitrogen oxide, and hydrocarbons. These machines, which operate automatically, sample for these substances every 5 minutes, record this on a piece of punched paper tape which we can then put in a computer, so that we can calculate the changes which have occurred in any area over a period of time.

So you can see there is a wide range, as Mr. Schueneman described, from visual observation of what is left on the window sill to the rather expensive and exotic electronic equipment.

Mr. SCHENCK. Dr. Prindle mentioned these instruments that you are putting around various places. They are portable instruments, aren't they?

Dr. PRINDLE. Some of these are. Some of them are not. The big ones I have just mentioned in the eight cities are movable, but they are far from portable. On the other hand, most of the type of equipment we use is at least readily movable and in certain cases we have literally mounted it in a truck and sampled in various parts of town in a period of a day.

Mr. SCHENCK. So even in these large expensive pieces of equipment you can go from one section of a city to another.

Dr. PRINDLE. Yes, sir.

Mr. SCHENCK. And, therefore, get a rather wide range of tests.

Dr. PRINDLE. That is right. The only problem here with, say, these particular ones that we are using in the eight cities, is that they are large enough that we had to provide temporary buildings for them. Obviously we are not going to move them very much. Our plan is to sample in one city for a period of a year or two, then to select another city in which to do similar sampling. It is too expensive for us to do it in all the metropolitan areas of the country.

Mr. SCHENCK. Mr. Chairman, I have thoroughly enjoyed and appreciated Dr. Prindle's testimony. I want to point out that the Federal Government does not have any money at all, not one

thin dime, that it does not first collect from people in the form of taxes or borrow from people because the savings of people are the only source of money for loans. Therefore, we as Members of Congress have to be constantly aware of that and to urge as much State and local cooperation as is possible, and to equate the cost of the job with the benefits that are done. In other words, many seem to feel that anything that the Federal Government does is free. I would like to point out that there is not any such thing as a free lunch. That is all I have.

Mr. ROBERTS. Mr. Rhodes?

Mr. RHODES. Mr. Chairman, I would first like to commend Dr. Prindle and his very capable assistant in the Public Health Service for their very interesting and informative statements. I welcome this opportunity to come to this important industrial city of the South, which is so well represented in the Congress by our colleague, George Huddleston, who is a very able, respected and influential Member of the House of Representatives.

This is my third visit to this State. My first since I have been a Member of the Congress. I want to also commend the people of Alabama for being so well represented in the U.S. Senate by such outstanding men as John Sparkman and Lister Hill. It has been my privilege and a great pleasure to be associated with Senator Hill in this public health work. I think he is one of the outstanding, if not the most outstanding man, in the United States in the contribution that has been made to public health problems. Of course, I want to say that in the House Alabama is also represented by an outstanding leader in this field, our chairman of the House Subcommittee on Health and Safety. I think Mr. Roberts and I came to the Congress together, and it has been my pleasure to work with him. I know that he has made a tremendous contribution not only in trying to find a solution for this air pollution problem, but also in other fields pertaining to public health and safety.

I only have one question I would like to ask of Dr. Prindle, and that is what he thinks is the responsibility of the local and State governments dealing with this problem of air pollution, and what is the proper place for the Federal Government, the part that the Federal Government should take in this work.

Dr. PRINDLE. Sir, I feel I would be a very poor one to judge what the State and local governments should do in their own rights. I believe the role of the Federal Government is just as our law has outlined, provision of technical assistance, research knowledge, and the information on which a State and local government might act. I recognize that there is a serious problem, often at the local level, such as Mr. Schueneman has mentioned, one that is in the interjurisdictional area, that is between counties or between a city and its adjoining county, or between districts. Here I believe the State has a real responsibility in helping establish a uniform code, if you please, that will assist all of its citizens equally. But I think it would be improper for a member of the Federal Government executive branch, as I am, to comment further.

I think that Federal assistance, in the sense of providing technical assistance is desirable. As I mentioned, in Mr. Kennedy's message, the hope is expressed that there might be even Federal financial assistance to these states and localities on, say a matching basis. Having seen that the locality or State is sufficiently interested that

it will put up tax funds, it might behoove the Federal Government to render assistance in the form of financial grants, particularly for certain areas in which the expense of a program, or at least beginning a program, may be high.

Mr. RHODES. I would like to add one thing further. I am one who believes that the Federal Government has a very important part to play in this field. It is in a position to do what can't be done on a local and State level. I am not one of those who say that the Federal Government is big and bad. I think the Federal Government is just as close to the people as any other level of government. It is just as close as the people make it by their understanding, by their interest, and by their participation. I think that the Federal Government has a very important part to play, and again I say I think this committee is playing a very important part in meeting a problem and meeting many of these problems which are very important to the people, not only in Birmingham, Ala., but of the Nation.

Mr. ROBERTS. Thank you, Mr. Rhodes.

I am sure I speak for Mr. Huddleston and the Senators and certainly the chairman of this subcommittee for your complimentary words. We will be glad to try to extend your stay down here if you would like to be with us. We are glad to have you with us.

Mr. NELSEN?

Mr. NELSEN. I would like to make an observation and comment relative to this hearing. I think some of the information which has been brought out here will now be relayed to people of the area which in turn stimulates public interest and public cooperation. It would probably be impossible for any Government agency or any committee to go around installing afterburners on trucks and cars. The point is if the people learn the story, they in turn will participate. It is not the dollars so much as the interest that we can stimulate by hearings of this kind.

I would like to make comment about our good chairman and my colleague to my left, that our chairman has been very interested in this particular field. Sometimes I thought perhaps to get into the study of outer space would be more of a challenge and a great deal more excitement perhaps, but Ken has devoted a great deal of time to this study, and as this testimony is exposed, I can understand why. I want to add my compliment to those that have already been extended to him for providing leadership in the Congress in this very important field.

I might say, from a chamber of commerce approach in Minnesota, the weather was very mild when I left and very much like the weather is here. About 10 days ago I was with a committee that went to Amarillo, Tex., on the study of the extension of the Sugar Act. We left Sioux Falls, S. Dak., in sunshine and flew into a snow storm in Amarillo, Tex., and I was marooned there for 3 days and could not get back to the sunshine of Minnesota. I have to say you have fine weather here in Alabama and I am happy to be here again.

Mr. ROBERTS. Thank you. We are certainly glad to have you and appreciate what you have to say. If I can keep you long enough, I am going to see that you get an eight-point buck.

Mr. O'Brien?

Mr. O'BRIEN. Mr. Chairman, I too would like to compliment the witnesses. They certainly have taught me a great deal this morning.

I am not going to be the only member of this committee who is not going to say something about our chairman. My first reaction when I went on the Committee of Interstate and Foreign Commerce was to escape as quickly as possible from this subcommittee. I did not think I had too much in common. Other than being an automobile driver.

I do want to say this, that a State is very fortunate when it has in Congress a man who is willing to go beyond being a messenger boy for a district, who is grappling with these great problems that affect us all. I have stayed with this committee because the chairman in my opinion is a very dedicated man. He has demonstrated when it comes to matters of health there is no North, South, East, or West. We are all in the same boat.

I have just one question, Doctor. How quickly is pollution from an area such as Birmingham dissipated? How far does it extend beyond the generating point?

Dr. PRINDLE. This is something we have no great deal of knowledge on as yet. There is no question but what under certain circumstances it can be dispersed rather rapidly. In general, however, it is rather startling how limited, really, the air resource is, and when we get the particular phenomenon known as an inversion, a meteorological phenomenon that is quite frequent in many areas, then we essentially have the equivalent of a "lid" on the area. If wind movement is very low, higher pollution levels may be present for a long time—days. We are now attempting to evaluate and set up a study in an area in which several metropolitan areas exist, so that we can find out how much one city's pollution really came from next door, and just how far pollution does travel.

One instance that I can cite that it travels a good distance is that there has been considerable damage to certain truck gardens in New Jersey. This is an area in which no large cities exist. It is in the garden area of the Garden State. This damage has been estimated as somewhere between \$15 and \$20 million a year to these crops. Obviously, the pollution must come from a good distance, because the nearest cities are quite a few miles from that area. The same is true in the upper valley of the Connecticut River, in which damage to tobacco crops has occurred. Again no major obvious sources exist except those metropolitan areas some miles away.

Mr. O'BRIEN. That would underscore the necessity of State legislation authorizing cities in several counties perhaps to form a county authority, agency, or commission. Also, would it not indicate the desirability of some Federal legislation permitting interstate compacts? You mentioned the New York-New Jersey situation. Heaven only knows where the pollution comes from down around there. You might be getting it from New York or New Jersey or both.

Dr. PRINDLE. Some of the spokesmen in our Department have indicated that the type of legislation which they are considering would include that which would encourage either multidistrict or interstate and intrastate regional organizations to be established. As a matter of fact, this should be done not only with the backing of the Federal Government, but perhaps with our urging, recognizing that air pollution does not know any political boundaries, even international. We would look with encouragement toward any group organization, metropolitan or whatever, that would help solve such problems.

Mr. O'BRIEN. I was interested in one other thing, the list of cities that you read off. I noticed that some of them were what we call heavy industrial cities and some were not. I don't think of Washington, D.C. as an industrial city particularly. I did not notice Schenectady, N.Y., where General Electric is located. I don't know whether that is in your list or not.

Mr. SCHUENEMAN. We just did not happen to get there yet.

Mr. O'BRIEN. Isn't it a fact that air pollution to some degree exists in practically every city in the United States where there is any substantial amount of traffic.

Dr. PRINDLE. This is quite true.

Mr. O'BRIEN. Or industry or both?

Dr. PRINDLE. As a matter of fact, pollution exists where people exist. It is the activities of the citizenry, whether it be in the sense of driving cars, burning their leaves, heating their homes. All of these things are going to contribute. In an area such as Washington, you are quite correct, there is no industry except Government, if you wish to call that an industry. At the same time any of us who have driven to work there recognize the traffic problems and recognize that is a potential contributor.

Mr. O'BRIEN. And a very big volume of hot air.

Dr. PRINDLE. I am glad you said that.

Mr. O'BRIEN. I notice that in Birmingham the chamber of commerce has an air pollution committee, would it not be desirable for any chamber of commerce anywhere to have the same or perhaps the city, itself, have a volunteer committee headed by the health officer, if you want, and consisting of representatives of the various industries? Would that not keep the communities alert to this problem?

Dr. PRINDLE. It would certainly help. If I might, I would like to quote from an article by a very famous scientist, who incidentally has not been working with us, but independently, Dr. Walsh McDermott, who wrote recently in *Scientific American* on "Air Pollution and Public Health":

Public Health officials alone cannot be expected to secure the acquiescence of the hosts of private and public interests, businessmen, public officials, consumers and taxpayers in the considerable expense and effort that is necessarily involved. What is needed is a citizens' movement in the environmental-pollution field like the conservation movement of Theodore Roosevelt's day. The plant manager is reluctant to raise the factory smokestack 50 feet if nothing is done about the open burning at the city dump, and the city manager faces the same problem in reverse. A citizens' movement is needed, above all, to secure the cooperation of citizens—in minimizing pollution by the automobile, for example, by proper engine maintenance. An aroused public opinion has brought the establishment of air-pollution control boards in a number of communities across the country, some of them in interstate.

I think this is along this same line. Whether it be the chamber of commerce or a citizens' group is immaterial. But a body continually concerned with the problem and representing the people of the community would be most desirable.

Mr. O'BRIEN. Thank you very much.

Mr. ROBERTS. Thank you, Mr. O'Brien.

I want to thank you for your statement. I would like to say one reason I think our subcommittee has accomplished what it has is the dedication of members of the subcommittee. Here are men who have busy schedules who have come hundreds of miles to attend this hearing

and to try to be helpful not only to this State, but to all States which are afflicted with this problem. I want to thank you, Mr. O'Brien.

Mr. Schenck?

Mr. SCHENCK. I have no desire to contribute to the unfiltered hot air pollution, but I want to join my colleagues in their tribute to you. It has been my privilege to work with you since 1956. I have never known anyone more dedicated to the work of this subcommittee.

I would like to say, too, I think that the greatest contribution the Federal Government can make to this entire situation is the development of information which cannot be done at the local level and make it available to our local communities and to such organizations as local communities can develop. Now, with that sort of information scientifically developed that can be compared and coordinated and developed, and related to local problems, then the local community can do a better job for less money than it can do otherwise. Isn't that true?

Dr. PRINDLE. I think this is quite correct. Again, I mentioned training, in rather brief terms earlier in my discussion. Training and information, shall we say "getting out the word," is a very important role that we have to play.

Mr. SCHENCK. Yes. Now, some folks are wondering why they don't put the exhaust pipe of automobiles, trucks and busses, all of them, up in the air like they do on some tractor-trailer operations. Some of the engineers have told me several reasons why they don't—one is that putting it down to the ground there is greater turbulence, and, therefore, greater distribution of the exhaust gases and putting it up in the air also creates some heat problems that are dangerous to people. I mean they have to insulate those elevated exhaust pipes. Do you have any comment on that, Doctor Prindle?

Dr. PRINDLE. Sir, I recognize there have been several schools of thought on the subject, and considerable debate. As I recall, it was Congressman Brock who requested us some time ago to make a study in regard to this. I believe a report has been furnished the committee in which we made studies on the placement of the auto exhaust pipe. We believe that in the moving vehicle the placement is probably not terribly important, since at either level there is sufficient turbulence, so that what is coming out is being blown around. However, in the work we did at the request of this subcommittee, we were able to show that in the vehicle in traffic, where cars are literally bumper to bumper, this could make an important difference.

The placement, not only of this exhaust pipe down near the ground level, but the placement of the vent of the following car could play a very important role in that the occupants of the car behind the first may receive a very high level of carbon-monoxide because the vent of theirs is literally taking in air from the exhaust pipe of the preceding vehicle. This could play an important role in safety, and I think is one that should be brought to the attention of the people concerned with automobile safety. There have been other studies: Consumer's Reports pointed out that in certain types of station wagons, with the placement of the exhaust pipe near the back door, that when this was open the exhaust was literally sucked back into the vehicle as it drove along and again raised the carbon-monoxide levels. I believe these are things that your subcommittee would be most interested in, sir.

Mr. SCHENCK. Thank you very much.

Mr. ROBERTS. I think the subcommittee will take a 5-minute break at this time. We will resume with this witness when we come back.

(Whereupon, a short recess was taken.)

Mr. ROBERTS. The subcommittee will be in order.

Now, Mr. Schueneman, I wanted particularly for you to supply for the record, with leave to supply a complete list later, the cities that the Public Health Service has been interested in, that is what we call the 12 cities which you spoke of. Could you give us this fairly accurate, at least some of them?

Mr. SCHUENEMAN. Yes, sir, I can read it. This was a study done on National Air Sampling Network data collected for the period 1957 through 1959, from selected cities of the network, for which there was enough data to warrant the kind of data treatment that was to be made. Forty-eight cities were involved in this particular analysis of data, although there are about 175 cities that have from time to time been involved in the air sampling network. The data were broken up into seasonal groups, with the winter season being December, January, and February, and the others following the usual order.

During the winter season there were 7 of these 48 cities that had higher suspended particle pollution than Birmingham. Those seven cities were Wilmington, Del.; New York City; Philadelphia; Pittsburgh; Charleston, W. Va.; St. Louis, Mo.; Albuquerque, N. Mex.; Phoenix, Ariz.; and Los Angeles, Calif.

I might note that the reason for the high values in Albuquerque and Phoenix are undoubtedly associated with windblown surface dust. It is quite dry and dusty in that part of the country.

Then, considering these 48 cities for the year as a whole, and for the 3 years, there were 12 cities that had more suspended particulate pollution than Birmingham. These were Wilmington, Del.; New York City; Philadelphia; Pittsburgh; Charleston, W. Va.; Indianapolis, Ind.; Cleveland, Ohio; Des Moines, Iowa; St. Louis Mo.; Albuquerque; Phoenix; and Los Angeles.

I want to emphasize that this measure of suspended particulate matter is only one measure of pollution. We must also consider the gaseous pollutants and other particulate components of pollution. The particulate measured here is the gross weight of the particulate matter in the air. It gives no consideration as to what it is.

Mr. ROBERTS. Then, could you say from experience in Albuquerque and Phoenix that it does not necessarily follow that a city of heavy industry is affected by pollution? What I am trying to say is that those two cities I would not consider as being heavily industrialized.

Mr. SCHUENEMAN. No, sir, they are not, I believe.

Mr. ROBERTS. You would say that this problem is not necessarily tied in with heavy industry. I mean it can occur in cities of other types?

Mr. SCHUENEMAN. Yes, sir.

Mr. ROBERTS. And does occur in cities of other types?

Mr. SCHUENEMAN. Yes, sir. It occurs in those two communities, Albuquerque and Phoenix, because of pollution that we would not ordinarily consider manmade pollution.

Mr. ROBERTS. I was interested particularly in one example you gave, Nashville, Tenn. I am fairly familiar with Nashville. I would not consider Nashville anything like in the class of heavy-industry cities like Birmingham. Would you agree with that statement?

Mr. SCHUENEMAN. That is right. It is not pervaded with heavy industry. The pollution in that town is due in substantial measure, to use of coal for fuel, and because of particularly bad meteorological and topographical conditions that restrict ventilation.

Mr. ROBERTS. Mr. Huddleston, do you have any questions?

Mr. HUDDLESTON. Yes, Mr. Chairman.

Continuing with our local situation here in Birmingham, I would like to ask Mr. Schueneman a question or two.

Mr. Schueneman, in your opinion, have the studies that have been made relating to Birmingham been sufficiently detailed and sufficiently thorough to be able to draw any conclusions regarding the air pollution in this area that would give our people here some idea as to the seriousness of our situation?

Mr. SCHUENEMAN. Based on all the information I have available, I can say that the pollution situation in Birmingham is worse than you would want to accept, and that the sources of pollution, many of them, are pretty well known and could be brought under control with existing information.

Mr. HUDDLESTON. You mentioned the sources of the pollution. What do your studies indicate are the sources in the Birmingham area that might be our problem areas?

Mr. SCHUENEMAN. Certainly, when you think of Birmingham you think of the primary metallurgical industries, the iron and steel industries. Another principal source that many cities have already undertaken control of is use of soft coal in hand-fired furnaces. This is not necessary. You can fire soft coal in mechanical stoking devices and prevent smoke, or you can use different kinds of fuel. Among some of the others that I recall, I believe—I had better look them up—suffice it to say there are a number of obvious sources that you can see, just with the naked eye, the visual pollution rising from these that you know are causing the problem.

Mr. HUDDLESTON. These sources appear in the 1958 report dealing with air pollution in Birmingham.

Mr. SCHUENEMAN. In a generalized sense, yes, sir.

Mr. HUDDLESTON. I believe that is all.

Mr. SCHUENEMAN. That is a general picture. If one wanted to get more detailed and specific as to how far he ought to go in control of certain other sources of pollution, then he would be well advised to have some further investigation before moving.

Mr. O'BRIEN. Mr. Chairman, may I ask a question.

Mr. ROBERTS. Mr. O'Brien.

Mr. O'BRIEN. I recognize that the problem, you say, is serious here, and it is worse than it should be. But isn't it a fact when you read over the list of cities that are worse off when you place Birmingham in juxtaposition with other industrial cities it stands out very well. It is no worse than the average. Is that correct?

Mr. SCHUENEMAN. For its size, I think it is probably worse than the average.

Mr. O'BRIEN. For its size?

Mr. SCHUENEMAN. For its size. Most of the cities that I mentioned, that had more suspended particulate pollution than Birmingham, are larger than Birmingham by a factor of 2 or 3, such as New York, Philadelphia, and Pittsburgh. These are cities much larger and yet have only slightly more pollution.

Mr. O'BRIEN. What about Charleston, W. Va.?

Dr. SCHUENEMAN. That is a smaller town.

Mr. HUDDLESTON. You omitted Chicago from the list of cities that have a worse pollution problem than Birmingham. What is the situation in Chicago?

Mr. SCHUENEMAN. By a quirk of fate, Chicago was not among these cities.

Mr. HUDDLESTON. Chicago was not surveyed?

Mr. SCHUENEMAN. Was not in this grouping. For some reason or other we did not have sufficient data on Chicago at the time this was written to determine.

Dr. PRINDLE. May I comment here that Chicago is most fortunate in its meteorology and topography, which assists it in the solution of its air pollution problem considerably. Actually, if they had the same type of meteorology and topography that some other cities do, they would have a more severe problem than they do.

Mr. SCHUENEMAN. I would not want to leave the impression that these are the only cities in the country that have more or less pollution than Birmingham. There are many cities that we have not included in the list under consideration at this time. I am sure there are more than seven cities in the United States that are dirtier than Birmingham.

Mr. HUDDLESTON. I would like to make reference to cities with the heavy type of industry such as we have in Birmingham. I notice on your list you have such cities as Pittsburgh and Cleveland, to name two of them, which are steel towns so to speak, that have a higher ratio of air pollution than Birmingham. How do you think that Birmingham stacks up with other iron and steel centers in the country?

Mr. SCHUENEMAN. That is a tricky one. I would not like to make a categorical answer to that, if I can defer it.

Mr. HUDDLESTON. Let us compare Birmingham with Pittsburgh and Cleveland. How do they compare with the other cities in the survey?

Mr. SCHUENEMAN. Comparing Birmingham with Pittsburgh, I would not want to answer that on the basis of information that I can call to mind at this point. There are too many factors involved, including gaseous pollutants and suspended particulate pollutants and so forth. I do not have at hand, and in mind, the data.

Mr. HUDDLESTON. On the basis of the survey of the 48 cities, which I believe is particulate pollution, I think the table speaks for itself. But what I want you to do is to get into the record how Birmingham, as far as particulate pollution is concerned, compares with Pittsburgh and Cleveland, other major iron and steel producing centers.

Mr. SCHUENEMAN. On the basis of this 3-year period measurement of suspended particulate matter, average concentrations in Birmingham were found to be 161 micrograms per cubic meter. For Pittsburgh they were found to be 215. What was the other one?

Mr. HUDDLESTON. Cleveland.

Mr. SCHUENEMAN. For Cleveland it was 176.

Mr. HUDDLESTON. So both Cleveland and Pittsburgh had a higher incidence of particulate pollution than Birmingham?

Mr. SCHUENEMAN. Yes, sir. At these particular locations. These are measurements made at one location in the central downtown district. This has a lot of influence on the value you get. It may be in one community the sampling station is very close, say within a

couple of miles, to a major source of pollution, whereas in another community it may be 5 miles. So, you have to consider so many things when you say, Is city A dirtier than city B? There are many, many factors to be involved in that.

Dr. PRINDLE. If I can interject again, I think the situation, as Mr. Schueneman says, is extremely difficult to compare. Not only do you have the situation in Pittsburgh where the surrounding countryside is also contributing mightily to their air pollution problems, since the plants in Pittsburgh are only a part of the total pollution source. There are plenty of others outside even Allegheny County that are contributing to that pollution. To a large extent the same is true of Cleveland. Again, too, as he mentioned, the location of the plants, which, in the case of both of those cities in certain situations are right in the downtown area, contribute again to a changed picture. The difference between some of these figures such as 161 and 176 are relatively minor. In other words, to sum up, Birmingham is right up there with them.

Mr. RHODES. To what extent is air pollution control a factor in the differences between these cities?

Dr. PRINDLE. At the time of this study I would say it was not a major factor in most of the situations. I believe Pittsburgh, of course, did have considerable control of its soft coal burning. This, of course, would be a main factor in the diminution. There is no question that the levels we are finding now are considerably lower than they were a few years ago.

Mr. Schueneman, I think you might add to this.

Mr. SCHUENEMAN. There is no doubt there has been a lot of progress made in the control of air pollution in most of these cities. Certainly, New York, Philadelphia, Pittsburgh, St. Louis, and Los Angeles. These towns have all made tremendous strides in the control of pollution. Pollution would have been much higher now had they not engaged in pollution control, although it is still pretty high. It would have been a lot worse.

Mr. O'BRIEN. Would it not be fair to say it is a serious problem wherever there is still manufacture? There are no exact figures available at this time to say which is better or which is worse. All three have a problem by the fact that they are at least thriving industrial centers.

Dr. PRINDLE. I think there is another thing out here, however, which may have been missed earlier in Mr. Schueneman's testimony. That although steel is a contributor here, during the steel strike we were able to show there was still a considerable amount of pollution in Birmingham, even when the industry was shut down. So that there are plenty of other sources that require recognition and control in this area.

Mr. ROBERTS. Gentlemen, we must move on. We have other witnesses. If there are no further questions from the subcommittee at this time, or Mr. Huddleston, we will take the next witness. Thank you, gentlemen, very much.

Mr. SCHUENEMAN. Would you like to put the entire table in the record?

Mr. ROBERTS. Without objection, I think it would be well to put it in the record.

(The statement referred to follows:)

TABLE 3.—Seasonal levels of suspended particulate matter at certain selected cities in the national air sampling network (urban stations)

Station	Region	Mean levels, ug/m <sup>3</sup>					Relative levels			
		Winter	Spring	Summer	Fall	3-year	Winter	Spring	Summer	Fall
Hartford, Conn.	I	127	106	80	85	100	1.27	1.06	0.80	0.85
New Haven, Conn.	I	119	79	84	89	93	1.28	.85	.90	.96
Boston, Mass.	I	186	153	115	127	143	1.30	1.07	.80	.89
Providence, R.I.	I	124	141	95	113	117	1.06	1.21	.81	.97
Burlington, Vt.	I	52	64	50	43	53	.98	1.21	.94	.81
Wilmington, Del.	II	232	179	161	145	180	1.29	.99	.89	.81
New York, N.Y.	II	229	210	187	170	200	1.15	1.05	.94	.85
Philadelphia, Pa.	II	215	170	140	205	185	1.16	.92	.76	1.11
Pittsburgh, Pa.	II	225	242	219	162	215	1.05	1.13	1.02	.75
Baltimore, Md.	III	179	157	122	120	144	1.24	1.09	.85	.83
Charlotte, N.C.	III	177	117	74	115	122	1.45	1.02	.61	.94
Norfolk, Va.	III	140	125	102	93	114	1.23	1.10	.89	.82
Charleston, W. Va.	III	243	242	138	231	215	1.13	1.13	.64	1.07
Birmingham, Ala.	IV	211	157	110	159	161	1.31	.98	.68	.99
Tampa, Fla.	IV	100	100	79	93	93	1.08	1.08	.85	1.00
Atlanta, Ga.	IV	127	121	114	102	117	1.09	1.03	.97	.87
Jackson, Miss.	IV	98	75	102	82	82	.83	.91	1.24	1.00
Columbia, S.C.	IV	152	126	100	124	125	1.22	1.01	.80	.99
Nashville, Tenn.	IV	158	166	132	154	153	1.03	1.08	.86	1.01
Indianapolis, Ind.	V	195	169	155	165	171	1.14	.99	.91	.96
Detroit, Mich.	V	158	177	144	140	155	1.02	1.14	.93	.90
Cincinnati, Ohio	V	160	129	130	138	140	1.14	.92	.93	.99
Youngstown, Ohio	V	162	163	129	182	159	1.02	1.03	.75	1.14
Cleveland, Ohio	V	183	190	172	156	176	1.04	1.08	.98	.89
Columbus, Ohio	V	163	147	148	173	158	1.03	.93	.94	1.09
Milwaukee, Wis.	V	143	164	145	154	152	.94	1.08	.95	1.01
Des Moines, Iowa.	VI	198	179	166	140	172	1.15	1.04	.97	.81
Minneapolis, Minn.	VI	166	183	77	91	128	1.30	1.43	.60	.71
Kansas City, Mo.	VI	176	175	147	161	165	1.07	1.06	.89	.98
St. Louis, Mo.	VI	217	185	172	193	192	1.13	.96	.90	1.01
Omaha, Nebr.	VI	114	134	112	172	134	.85	1.00	.84	1.28
Bismarek, N. Dak.	VI	63	127	97	78	93	.68	1.37	1.04	.84
Sloux Falls, S. Dak.	VI	92	128	80	102	102	.90	1.25	.78	1.00
Little Rock, Ark.	VII	80	84	84	90	85	.94	.99	.99	1.06
New Orleans, La.	VII	92	97	74	105	92	1.00	1.05	.80	1.14
Albuquerque, N. Mex.	VII	304	153	188	219	212	1.43	.72	.89	1.03
Houston, Tex.	VII	119	143	108	120	123	.97	1.16	.88	.98
San Antonio, Tex.	VII	150	156	110	114	133	1.13	1.17	.83	.86
Denver, Colo.	VIII	163	105	103	123	125	1.30	.84	.82	.98
Boise, Idaho.	VIII	119	97	113	137	117	1.02	.83	.97	1.17
Helena, Mont.	VIII	67	64	97	92	81	.83	.79	1.20	1.14
Salt Lake City, Utah.	VIII	160	97	98	114	116	1.38	.84	.84	.98
Cheyenne, Wyo.	VIII	42	41	65	61	52	.81	.79	1.25	1.17
Phoenix, Ariz.	IX	303	203	167	231	228	1.33	.89	.73	1.01
Los Angeles, Calif.	IX	246	160	190	234	204	1.21	.78	.93	1.15
San Francisco, Calif.	IX	115	66	56	80	80	1.44	.83	.70	1.00
San Diego, Calif.	IX	118	74	86	109	98	1.20	.76	.88	1.11
Portland, Oreg.	IX	105	75	70	133	96	1.00	.78	.73	1.39

Mr. ROBERTS. Dr. Gallalee?

Dr. Gallalee is a former president of the University of Alabama, an old friend of mine. I don't mean in point of age, but I mean we have had a long friendship. He is recognized, of course, as one of the outstanding engineers in the southern part of our country. I think the chamber of commerce is very fortunate in having selected Dr. Gallalee as chairman of its study advisory committee. It is a great deal of pleasure that we welcome Dr. Gallalee.

You may proceed with your statement.

**STATEMENT OF DR. JOHN M. GALLALEE, CHAIRMAN, ADVISORY COMMITTEE ON AIR POLLUTION, JEFFERSON COUNTY BOARD OF HEALTH**

Dr. GALLALEE. This is a statement of the Advisory Committee on Air Pollution of the Jefferson County Board of Health to the Subcommittee on Health and Safety of the House Committee on Interstate and Foreign Commerce, dated November 27, 1961.

The Birmingham Chamber of Commerce, representing most of the businesses and professional leadership of the community, has been interested in the problem of atmospheric pollution for a number of years. The business interests of the community have cooperated with the Jefferson County Board of Health and the local governmental bodies of the area over these years, as there are certain aspects of the problem that involve the public health and will require action by local and State governing bodies.

Some studies have been made by the U.S. Public Health Service in cooperation with the Jefferson County Board of Health in this area.

At the request of the Jefferson County Board of Health, the Birmingham Chamber of Commerce was asked to name an advisory committee on air pollution to the Jefferson County Board of Health. The board of directors of the Birmingham Chamber of Commerce authorized its president, Mr. Sidney W. Smyer, to appoint the committee. The committee appointed is composed of citizens representing, as nearly as possible, all groups affected or interested in this problem, including representatives of industry, labor, and various governmental agencies in Jefferson County.

I was asked to serve as chairman of this advisory committee. This advisory committee has met with officials of the Jefferson County Board of Health and the U.S. Public Health Service and has set up broad outlines within which the committee will function and cooperate with the appropriate governmental agencies.

The advisory committee believes that the problem of air pollution must be considered on a local regional basis in order to determine the sources, extent, and results of air pollution. After such determination is made the committee must endeavor to secure appropriate action from both industry and government for the control of air pollution.

The advisory committee feels that any problem in this field must be considered from a long-term and continuing basis and that past studies and research, both local and national, should be continued and expanded. The work of both the city of Birmingham and the U.S. Public Health Service in previous air samplings made in the Birmingham area and the research of the Public Health Service on a national basis must necessarily be continued and expanded in order to determine first the problems, and secondly, the steps necessary to control whatever problems may be found to exist. Although the problems of air pollution control obviously must be handled on a local basis in every case and can be made effective only with an acceptance by all of the citizens of the community including necessarily the industrial citizenship, the Public Health Service can render invaluable help to the local community in this problem by continuing its program of research, particularly in the determination of the results of the various kinds of air pollution.

That concludes my statement, Mr. Chairman.

(The members of the advisory committee on air pollution are as follows:)

BIRMINGHAM CHAMBER OF COMMERCE

STUDY AND ADVISORY COMMITTEE ON AIR POLLUTION IN THE JEFFERSON COUNTY AREA

- Dr. John M. Gallalee, chairman, 305 North 21st Street, Birmingham, Ala.  
 J. C. Barry, Standard Oil Co., Post Office Box 2654, Birmingham, Ala.  
 R. W. Block, National Woodworks, Inc., Post Office Box 5416, Birmingham, Ala.  
 B. Roper Dial, Sears, Roebuck & Co., 1531 North Second Avenue, Birmingham, Ala.  
 Robert W. Holman, TCI Division, United States Steel Corp., Post Office Box 599, Fairfield, Ala.  
 William E. Hood, Industrial Paint Manufacturing Co., Post Office Box 2371, Birmingham, Ala.  
 James A. King, Reese-King Realty Co., 2212 Third Avenue, North, Birmingham, Ala.  
 L. E. King, Southern Railway System, 2201 First Avenue, North, Birmingham, Ala.  
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 C. P. Rather, vice chairman, Southern Natural Gas Co., Post Office Box 2563, Birmingham, Ala.  
 Mark Norton, Planning and Zoning Board, city of Birmingham, Birmingham, Ala.  
 Charles A. Speir, Jefferson County Planning Commission, county courthouse, Birmingham, Ala.  
 Donald Stafford, president, Birmingham Labor Council, AFL-CIO, 28½ South 20th Street, Birmingham, Ala.  
 B. L. Wyman, Jr., Lone Start Cement Corp., 2130 Highland Avenue, Birmingham, Ala.

Mr. ROBERTS. Thank you, Dr. Gallalee. I want to express the thanks of the subcommittee for your appearance, and your contribution. I certainly congratulate the business community, its citizens and the chamber of commerce in selecting you as chairman of this very important committee. I want to wish you every success in your work.

Are there any further questions, gentlemen, from the subcommittee?  
 Thank you.

Dr. GALLALEE. Thank you, Mr. Chairman.

Mr. ROBERTS. Is Dr. Branscomb here?

Dr. Branscomb is assistant professor of the university medical center, and has done what we think is very important work in the field of emphysema. We are happy, Doctor, to have you and would like to tell us about your work.

STATEMENT OF DR. BEN V. BRANSCOMB, ASSISTANT PROFESSOR,  
 UNIVERSITY OF ALABAMA SCHOOL OF MEDICINE

Dr. BRANSCOMB. Gentlemen, what I would like to do very briefly is point out first the close tie-in between the health problems, that is research into bronchitis and emphysema with the problem of air pollution. I would like to tell you what our program approach has been in our research program on this and suggest what our past source of support has been and what our problems are where we think we can utilize a system at the Federal level.

In the first place, though it is probably well known to this group, I think it might bear repeating for me to mention the magnitude

of the problem of chronic lung disease in this country. Emphysema is a common disabling lung condition in which the lungs become progressively less able to move air to and fro so that people get out of breath and they stay that way for years, and this can throw a strain on the heart too. Bronchitis and emphysema are increasing rapidly in this country. At the present time the increase in emphysema is faster, the increase in new cases is greater than the increase in incidence of cancer of the lung in this country.

Furthermore, the combined incidence of emphysema and chronic bronchitis as a cause of death in this country is just barely under cancer of the lung now as cause of death nationally. It is rising more rapidly than cancer of the lung is. So that is a problem as far as the death rate is concerned also. As far as disability is concerned, the people with emphysema stay sick for a long time. They have many years of a miserable life when they are very severely disabled. In fact, right now the second most common cause of all pensions given by the Social Security Administration for total disability is for pulmonary emphysema. The most common cause of pension is heart disease and blood disease such as strokes. I think the importance of the chronic lung disease will be continually increasing especially with the population getting older as it is.

I was amazed to learn of all the people who ever reached the age of 65 in the history of the world, it has been estimated one-fourth of those people are now alive on the face of the earth. This shift toward an aging population is so dramatic. So any disease that accumulates through time, any chronic illness that requires a long period to develop like chronic lung diseases can be expected to increase.

If there is a connection between emphysema and air pollution, and there is a great deal of evidence there is, this is particularly important to an aging population. What we have tried to do is to find out how to set about a research program to try to learn how much emphysema and bronchitis there is in the population in Alabama and to try to find out whether the symptoms and signs of these diseases have any correlation with the atmosphere, with air pollution, but also with the humidity in the air, with the temperature, with the person's occupation, the number of colds a person gets, his smoking history, and many other factors that might contribute to the development of chronic lung disease.

The way we have set out to try to answer the difficult questions, and the answers are not known now very well, although there is some evidence of some of these points, I might say evidence now suggests that perhaps as much as 10 percent of the male population above 45 has at least some evidence of pulmonary emphysema or chronic bronchitis in this country. In England these are the commonest causes of death in this whole country. In this country not that common, but it is still a pretty big problem. So what we have done is to develop a piece of apparatus, a machine in which a person can breathe.

This apparatus electronically records certain features of the way the person can blow into the machine and from the records taken it is possible to get a good deal of information about whether the person might or might not have some derangement in his breathing power, and consequently would imply the possibility of bronchitis or emphysema or some other lung disease.

The thing we have developed looks like a sensitive indicator for lung disease. Recently in a test we took 112 people of whom 57 were normal individuals who we knew were healthy and the other 53 were individuals with various degrees of lung trouble. Looking at the records we took on this group we found we missed only three times correctly guessing from the record, from the little test, itself, without knowing anything about the patient at all, from the test of the 112 people in all but we guessed whether they had any lung disease or whether they did not. This was significant because the same sick people were also tested by the conventional available hospital tests and those tests were only able to identify half of these sick people. So the system we have is a sensitive one. This has been installed into a bus. On the same bus is an X-ray machine which takes the chest X-ray and we have technicians trained in administering a questionnaire about health symptoms. With this bus, which we have already in the Birmingham area, and are now ready to go out into the many communities of Alabama, tested the people to see if we can pick up by means of questioning, the X-ray or this test, evidence of lung disease.

Now, in order to try to relate this to the problem of this meeting today, air pollution, which, as I say, is one of the possible contributing factors in the development of lung disease, to relate this we have sought the advice and counsel of the Air Pollution Division of the Public Health Service from which you have already heard testimony this morning. As a result of these consultations we have hit upon a plan and also our own ideas of getting the cooperation of at least 10 or 12 cities in Alabama, cities that differ widely in the environment in terms of industry, possible air pollution, occupation, rural versus city areas, and so forth. In these areas we intend to examine 300 carefully randomly selected families in those communities, and obtain a great deal of information about these people, their health and also about their occupational and environmental factors that might possibly contribute to lung disease. Then we hope to be able to examine the records we obtain this way, and possibly draw some conclusions concerning the frequency of the lung diseases, any possible correlations between the factors I have mentioned, weather factors, air pollution factors, smoking, occupation, age, race, other factors, with the presence of lung disease to give some direction and meaning where we now have only confusion about the possible cause and the evolution of these serious lung diseases.

Now, I would like to mention also that in our project we have to work in the medical school, in the laboratory, to try to understand the meaning of what we get in the field. This is a two-pronged study with laboratory effort here in the university, and also a field project which I have just been describing to you.

Now I would like to mention our past sources of support and what our future problems are in this project.

This project was begun by a small grant from the Public Health Service, from the Heart Institute. The purpose of that grant was to help us at the University of Alabama to try to develop some study of methods so that various places around the country can do studies like this and can compare their results and have meaningful comparisons. Since there are so many possible tests one can do, we have to have uniform tests in order to provide any sort of national comparisons and also specifically to provide comparisons with England where

the studies have gone on so frequently in the past on the bronchitis problem.

Now, this was a very short-term grant and it was spent about 3 years ago and it resulted in some preliminary comparison of methods. Following this, the Jefferson County Tuberculosis Association took over this project. Since that time our support has been solely from the University of Alabama, from the Jefferson County and the Tuberculosis Association, from the National Tuberculosis Association, which approximately matched the Jefferson County fund, and also by those agents from the county tuberculosis associations all over the State of Alabama, they sent in their funds to participate in the research program. This was presented to the counties as a research project, not any kind of service where we would deliver anything back to the county except knowledge about these diseases. And the actual operation of this field study is under the direct administration of Jefferson County and the State of Alabama antituberculosis associations, and in fact the bus we used is one of the very early X-ray survey buses that has had years of service trying to detect tuberculosis and cancer of the lung.

Now, we look forward most eagerly toward support which we hope we will be able to receive from the Air Pollution Division because of our not only financial but technical aid that we need. Let me illustrate the kind of assistance that we need for our project. In the first place, the data which we gather must be comparable to other areas in the country. If, for example, we find a certain percentage of people that live in rural Alabama do have this lung condition and they are breathing this certain kind of air, and if we learn in Los Angeles certain people there have certain lung diseases, and they breathe certain kinds of air, for this to have any meaning in terms of advising our whole country in how to proceed in eradicating these diseases and protecting the public, we have to have data that can be compared. The people in Alabama have to know that their test tests the same thing our test does. They have to know when they test the atmospheric pollution that their method is the same as ours. Furthermore, they must even know our questioning about symptoms is the same way they question about symptoms. In order to try to get uniformity in our questioning approach, I wrote Dr. Prindle, who sent me the questions that were used in a study in Seward and in Florence. I think he has already alluded to this study. We took their questions and lifted them out bodily and used them in our study. Those questions were derived from the use of the questions that the British used in their studies, also in California.

So if we come up with a conclusion that people cough more in Alabama or less than they do in California, we know that we had asked the same question about cough, therefore, we would have a meaningful comparison.

Another example of assistance we have received and need more of in the future is the matter of the statistical handling. Now, the calculations, the statistical work involved in a project like this is very complicated. About a year from now, or a year and 6 months from now, we hope to have examined at least 7,000 individuals in Alabama. That is, at least 7,000 tested specifically for this research project. We are also, of course, testing the general public and turning the information back to the patients' physicians for the use of those

physicians and use of these people just as you do on an X-ray test for TB. But that is not the main concern of this meeting this morning.

But the statistical handling of a project like this is really a very large job. The calculations could take literally months without the use of the modern electronic data processing systems and the Air Pollution Division has already used its own computers in solving questions similar to these questions I am raising in other studies elsewhere in the country. We are trying to set out our project so that our data can be fed directly into their same instruments and come up with comparisons which will be of not only local benefit, but perhaps national and international benefit.

We also need and have received very significant advice about the setting up of this whole project so the data can be of greatest national use. The Biometric Division of the Public Health Service has advised us at considerable length about the principles of setting up our program so that we will not make statistical traps which later might make our data of little value.

Now, another area in which we need assistance is this. We believe that our developments here at the University in cooperation with the TB Association, this bus with its lung testing systems on it, we believe this to be a very sensitive way to look for evidence of early disease in the population but we just don't know anything about air sampling. I am not an engineer and I am not really familiar with what questions I should even ask about air pollution. Yet I know that a study of this type would be really a tragedy to get the information we are going to get and not know what these people have been breathing. So we have gone to Dr. Prindle's group for assistance in that direction. We hope and expect they will come up with suggestions and with assistance in terms of engineering help, apparatus, whatever they feel would best make the study really informative from the direction of air pollution.

Now, I might mention in addition to these problems of where we need assistance in terms of engineering assistance and data handling assistance, assistance for planning and that stage, and the importance of getting good correlations of our data with other areas of the country, in setting up projects where that can be done, one other way we need assistance is this, not necessarily Federal, but assistance in general, is the university, to embark on a program like this, needs to know that it has a high probability if it does a good job and does the work it is trying to do, it has to feel pretty confident that it can have some kind of continuing support because the value of a study like ours will be so much greater if we can examine the same individuals at yearly intervals to observe the possible development of disease in these people.

We are dealing with a disease that probably occurs in 10 percent of the people, in males above 45. So in a long-term study like this a study like this cannot be carried out effectively on a short-term basis in which you don't have clear long-range direction. I would like to conclude by mentioning again that this project has been developed specifically and primarily by the support of the people who buy Christmas seals as a research effort here in Alabama and it was presented to the public that way. I am proud and gratified by the public response on that basis. When we did our first field testing on this we did it on a windy, cold, miserable day, yet people lined up to cooperate with this when they knew they were not getting anything out of it at

all. But, of course, the program now has expanded to where it has the possibility of contributing, I believe significantly, to the general health picture of the country. We certainly hope it will.

Mr. ROBERTS. Thank you, Doctor. The Chair has heard hundreds of witnesses before this subcommittee. I think this is one of the most interesting statements it has been my pleasure to have presented.

I first learned of your work when I read an article by Mr. Townsend in the Birmingham News. I would like to know how you got started. What was your inspiration for this type of machine and how you first started your research work that developed?

Dr. BRANSCOMB. My own position here at the university is the head of the lung disease division, but my training has included considerable time with Dr. George Wright up in Saranac Lake, N.Y., and in the Trudeau Laboratory where the main job was testing people's lungs, and then after I had my residence training at Vanderbilt, I went to the NIH and worked there in the Heart Institute and again set up a laboratory to try to learn what we could about measuring precisely what goes on when people breathe. This put me in a position so that my interest immediately drifted toward the detection, early, of lung disease. Most of the lung tests that had been developed before tended to be of greater value in examining fairly severely ill patients, but not too useful in terms of testing for early lung disease.

Then Dr. Frye and others at the NIH, in Washington, developed most of the concepts upon which our study has subsequently been based. Based on these, we went ahead to try to work out some device for detecting lung disease on an early basis.

Mr. ROBERTS. Is similar work in this field being done in other States?

Dr. BRANSCOMB. Yes, sir, it is. There are several projects around the country. These projects are not the same nor should they be, because the interests of the investigators and the problems of the communities differ. In some areas, for example, the emphasis has been on, say, getting very thorough hospital examinations on a small number of people. In other areas the emphasis has been primarily on very simple tests, but on more people than we tend to examine.

In Los Angeles the emphasis has been very heavily oriented to the possibility of automobile exhaust fume injury. However, most of these projects that have been going on, the people concerned have had a chance to get together at various meetings and to exchange ideas. I hope they will exchange their concepts of methods in such a way that the comparative studies will be of greatest value.

There is no study going on just like ours and so far I don't believe there is a study going on using our method of testing lung function.

Mr. ROBERTS. You spoke of the first money that you had, I believe, coming from the heart research work. Was that in the form of Federal funds?

Dr. BRANSCOMB. Yes, sir. The Heart Institute granted some money for the purpose of trying to study possible differences between lung conditions in England and in this country because they felt that perhaps if you knew these differences there might be some good clues about the origin and consequently prevention of these lung diseases. Those funds were spent by several different laboratories, each one trying to learn, each one charged with a different specific mission. My mission was to compare presently existing lung testing apparatus

to see which one would work best. We got about six or seven different devices that had been suggested by various research workers to test the lungs. We put them all on the Jefferson County TB Association's bus. We rang them in as a helper on this effort. They lined up for us a number of people who would go in the bus and breathe on these different pieces of apparatus. We had the same people breathing on six different machines so we could compare to see which one looked best.

Mr. ROBERTS. How long does it take you to examine a patient with this machine?

Dr. BRANSCOMB. About 2½ minutes.

Mr. ROBERTS. You can test with your apparatus about six at a time?

Dr. BRANSCOMB. Taking them one at a time, but you have a production line because you have your technicians giving the X-ray and administering the questionnaire at the same time. We have actually run, I think, about 200 people in a day, but I think to do the job we need to do we probably run 100 people through a day.

Mr. ROBERTS. You would say this aids in the early detection of lung disease?

Dr. BRANSCOMB. We certainly think it may, but this has not been established yet. We hope our research will establish whether it does or does not lead to detection of lung disease early. I might say so far in our preliminary experiments we find that asking questions of people can detect lung disease with amazing frequency. We examined one group of people here in a local corporation and found six people who were coughing up blood, just from asking the questions, and they had not done anything about it. Of course, that is a very serious symptom. It led us to believe that perhaps public education was a little deficient.

Mr. ROBERTS. How expensive was this machine to construct?

Dr. BRANSCOMB. Let me emphasize, Mr. Roberts, this machine now is a research device which would probably have little use out of the hands of some investigators who were personally very much concerned about its use and familiar with it, and wanted to use it. It has not progressed where it would have any possible general application except in the hands of investigators. It would cost about \$2,500, I would say, to make one of these machines, which is a lot less than an X-ray machine that has proven so valuable.

Mr. ROBERTS. How do we compare in the southern region with other sections of the country in the incidence of tuberculosis and other lung disease?

Dr. BRANSCOMB. I don't know how we compare with regard to the incidence of tuberculosis though I know in Alabama the incidence remains high and for this reason the TB Association has been very careful to make sure the public has understood that this research effort in no way subtracted from, in fact enhanced its present TB efforts. You see, our X-ray will still pick up TB on this bus like it always did.

Mr. ROBERTS. With X-ray?

Dr. BRANSCOMB. With X-ray, yes, sir, but TB is still a very serious problem though it is progressively coming under control in the South. Other lung diseases you asked about, I don't know the answer to that. Maybe the project will tell us.

Mr. ROBERTS. In the field you mentioned of emphysema how do we compare?

Dr. BRANSCOMB. Nobody knows the answer to this, I don't think.

Mr. ROBERTS. That is all I have.

Mr. Schenck?

Mr. SCHENCK. I have a lot of questions but I don't want to take any more of the Doctor's time.

Mr. ROBERTS. Mr. Rhodes?

Mr. RHODES. I feel that Dr. Branscomb has made a very valuable contribution to this committee. His statement was very interesting and informative to me. I don't know how Birmingham compares with other cities in fighting the air pollution menace, but I want to say that Birmingham apparently has very splendid cooperation. Representatives of the chambers of commerce have shown the interest of the business community and its problems, and also by bringing in other elements in the community. I think that is a very good example.

I want to commend the witness that appeared here representing the community.

Mr. ROBERTS. Thank you.

We have two representatives from the Jefferson County Board of Health, Dr. Sweeney and Dr. Denison. Would you like to appear together?

**STATEMENTS OF DR. DONALD B. SWEENEY, CHAIRMAN, JEFFERSON COUNTY BOARD OF HEALTH, AND DR. GEORGE A. DENISON, HEALTH OFFICER**

Dr. SWEENEY. I am Dr. Donald B. Sweeney, I am a practicing neurosurgeon in the associate capacity of surgery at the medical school, and serve in the capacity as chairman of the Jefferson County Board of Health.

Dr. Denison is the county health officer, and together we have been working on this problem.

The Jefferson County Board of Health is of the opinion that pollution of the atmosphere in the Jones Valley area of Metropolitan Birmingham, Ala., is of sufficient concentration and persistence as to constitute a public health problem affecting the general health of the area and is responsible for the aggravation of chronic lung disease, bronchitis, sinusitis, emphysema, bronchial asthma, and allergic conditions which are often relieved simply by leaving the air polluted area.

Pollution of the air is from varied and multiple sources and the effects are aggravated by its accumulation due to a mountain-valley topography with weak air drainage.

This multiplicity of pollution sources and general community responsibility has been recognized by the board of health and by the chamber of commerce. As recently as last Tuesday, an advisory committee of the chamber of commerce to the board of health met to hear Mr. Vernon G. MacKenzie, chief, Air Pollution Control, U.S. Public Health Service, review air pollution problems at a national level. Mr. MacKenzie pointed up need for local initiative in efforts to limit atmospheric pollution. He indicated that the Public Health Service was interested, but had limited means in offering technical assistance.

In 1953 the U.S. Public Health Service initiated a network of 54 cities for the study of atmospheric pollution. The local health department joined this study in January 1957. In 1958, at the request of Associate City Commissioner Waggoner and the health officer, Dr. George A. Denison, the Public Health Service made a spot survey of the general conditions affecting air pollution. The data accumulated from these studies has rated Birmingham as one of the major metropolitan areas with a serious air pollution problem.

In presenting the foregoing testimony relative to air pollution in the Birmingham area, the board of health is cognizant that it presents to the congressional committee a situation which is common to a number of cities. Early efforts for study and control require that technical assistance be developed and made available to local communities.

The question of how the Federal Government, through the Public Health Service, may be of material assistance to State and local governments is evident from our local situation. The technical engineering assistance is a scarce commodity which can hardly be developed locally and must come through some national resource. We would also look to the Public Health Service, Congress permitting, for limited grants-in-aid, such as are customarily provided in other fields of public health to give financial aid in the initiation of a local program. Support of this kind would accelerate a control program without minimizing legal responsibility of local government.

Mr. ROBERTS. Thank you, Dr. Sweeney.

In your opinion do you think that the air pollution program of the Federal Government should be continued?

Dr. SWEENEY. Yes, sir, I think that it should be, and perhaps expanded to help in giving communities the technical advice that has been made available by the research programs that the Public Health Service has done in the past.

Mr. ROBERTS. Do you believe that the collection and dissemination of information and the supply of technical services can best be done by the Federal Government?

Dr. SWEENEY. We think that it can be to help us find out exactly what our program is so that we can propose the solutions. I think that to stimulate interest in this program we must find out exactly wherein our problem lies.

Mr. ROBERTS. Is this the joint statement, Dr. Denison, or would you like to add to Dr. Sweeney's statement.

Dr. DENISON. No, except to point out that we have the type of committee with the chamber of commerce which was described this morning as one that is desirable so far as it represents broad community interest. For example, the planning commissions are represented, as well as labor. We think that with the assistance that the Public Health Service has already given us, and with citizen support, that we are now in a position to move toward the assumption of more detailed information and study, which studied along with the chamber of commerce committee, will eventually lead to some monitoring, some elimination of our grosser pollution, and eventually to the kind of regulation and legislation which we need.

Mr. ROBERTS. Thank you, Doctor.

Mr. Schenck?

Mr. SCHENCK. No questions.

Mr. ROBERTS. Are there any questions?

Thank you, gentlemen, very much.

Now, do we have any public officials here, or citizens of Jefferson County, who would like to make a statement to the committee? If so, we will be glad to give you the opportunity.

Gentlemen, I have a statement for the record and I will not read it, a statement of Mr. Ed. C. Reid, executive director of the Alabama League of Municipalities, both as director of the Alabama League and as a member of the board of directors of the American Municipal League. Without objection, I would like to offer it for inclusion in the record.

(The statement referred to follows:)

STATEMENT OF ED E. REID, EXECUTIVE DIRECTOR, ALABAMA LEAGUE OF MUNICIPALITIES

Mr. Chairman and members of the subcommittee, I am Ed E. Reid, executive director of the Alabama League of Municipalities, and a former member of the Executive Committee of the American Municipal Association. I appear before you in behalf of both organizations. First, I want to thank the subcommittee for taking the time to come here to Alabama to discuss and consider our air pollution problems and to get the views of our people on air pollution control.

I think that without question scientific research shows that air pollution affects the public health. Investigations conducted in many areas—investigations which have been given a great deal of national publicity—indicate that air pollution has something to do with heart disease, with lung cancer and other illnesses and also there is evidence showing it to be harmful to plant life, costing our farmers millions of dollars every year.

For a very long time it was generally assumed that air pollution came chiefly from smoke, dust and chemical fumes. That was certainly the general feeling or belief here in the Birmingham district. Various studies were made of the cost resulting from the supplementary washing and dry cleaning required because of smoke and also the cost of renewing paint and wallpaper and replacing merchandise on store shelves damaged by smoke. But more recent and authoritative studies show that the problem is much more than just smoke, whether smoke from industry, home furnaces or the burning of trash.

It has been found in southern California and other sections of the country that the automobile is the chief culprit and great efforts are now being made to do something to eliminate fumes thrown into the air by motor vehicles. One Government scientist was quoted the other day as saying that it might even be necessary to go back to the electric automobile to beat the smog problem.

The U.S. Public Health Service is doing a lot of important research in this field to find the answers we need at the local level to do something about air pollution. The PHS is doing work which the Nation's cities do not have spare funds to use in this kind of undertaking. Therefore, I think the Federal air pollution research program should be continued—and even expanded. The cost is just a drop in the bucket compared with the cost of other worthwhile health research programs underway. With air pollution affecting every section and every locality in the country, and millions of our people, I think this type of research is fully justified.

I mentioned at the beginning of this statement that I testify both for the Alabama League of Municipalities and the American Municipal Association. Let me say in that connection that the League is composed of 271 of Alabama's 300 town and city governments. The American Municipal Association is made up of 46 State municipal leagues with a combined membership of 13,000 municipalities. We support the national municipal policy of AMA on this subject of air pollution control. At this point I would like to set forth, as follows, in my statement for the benefit of your subcommittee the national policy of the American Municipal Association on this very important subject of air pollution control:

"Air pollution in our urban areas involves the emission of a broad variety of gases, fumes, and solids and is associated with many and diverse activities of our population. These pollutants resulting from our increasing industrialization and urbanization now pose a threat to the health of our people.

"The full extent of the air pollution problem is unknown because enough measurements have not been made. It is estimated that 10,000 communities in

the United States have air pollution problems. All of the Nation's 215 metropolitan areas are affected, and in all, three-fourths of our total population is subjected to continuous or intermittent air pollution.

"The acute lethal potential of air pollution has been demonstrated in Donora, Pa., where 20 persons died and half the population were made ill. Other effects of air pollution range from irritation of the eyes, nose and throat to more subtle and long-range physiological changes contributing to chronic illness or premature death.

"Air pollution produces slums. Depreciation of land values alone due to air pollution has been estimated at over \$200 million annually and depreciated values of buildings is several times this amount.

"At the National Conference on Air Pollution in Washington in 1958, the cost of air pollution to every man, woman and child in the United States living in urban areas was estimated to be \$65. On this basis, air pollution is costing the Nation \$7.5 billion annually.

"Brief studies made thus far show that the menace of air pollution is far more extensive than has been previously realized.

"We recognize that control of air pollution is a basic responsibility of State and local governments but the Federal Government must play an important part in the solution of this problem because of its national significance. The Federal Government has research resources available to it which the State and communities lack. It would be uneconomical and wasteful if each jurisdiction were to attempt to undertake such research. In addition, there is need for financial assistance from the Federal Government to stimulate the development of and improve regulatory control programs on State and local government levels.

"There are numerous metropolitan areas which involve two or more States, and air pollution is not a respecter of political lines of jurisdiction. The exercise of Federal leadership to deal with such problems on a problem-area basis can provide the stimulation to recognize and solve the air pollution problem.

"The American Municipal Association therefore urges the enactment of a long-range Federal air pollution control program which would provide:

"(1) Strengthened permanent Federal air pollution control legislation which would enable the U.S. Public Health Service to:

"(a) Cooperate with other Federal agencies, State and local air pollution control agencies, and industries in the development of comprehensive air pollution control programs. Provide more vigorous leadership to secure needed attention, study and correction of air pollution problems by all levels of government, by business and industry, and by the general public.

"(b) Provide technical and financial assistance to State and local air pollution control agencies. Such Federal assistance is urgently needed to stimulate and aid in the conduct of more effective regulatory programs for air pollution control.

"(c) Collect, evaluate, and disseminate basic data and other information relating to the prevention and abatement of air pollution.

"(d) Provide enforcement assistance to be used when requested by any State, interstate, intermunicipal or local government air pollution control agency.

"(e) Provide grants-in-aid to State and local government air pollution control agencies, and other public and private agencies and institutions, and to individuals, for surveys and studies and for research, training, and demonstration projects.

"(f) Encourage cooperative activities between State and local governments, including the enactment of interstate and intermunicipal legislation where necessary.

"(2) Realistic appropriations are necessary to the success of an effective long-range air pollution program and must be commensurate with the magnitude of the problems. To this end, the present limitations on annual appropriations for the air pollution program should be removed.

"As the industry having primary responsibility for abatement of contaminants emitted by motor vehicles, the motor vehicle manufacturing industry of the United States is requested and implored to report with all possible dispatch to the Nation, the States, and its cities concerning:

"(1) Its constructive accomplishments to date in meeting this potential threat to the public health.

"(2) Planned future efforts to meet and avoid or minimize it, and the time scheduling of such efforts.

"(3) As an immediate practicable and specific action, the industry is urged to provide, on a voluntary basis, devices on all new cars to minimize pollutant emissions from crankcase vent gases.

"The American Municipal Association lauds the program and recommendations of the National Conference on Air Pollution of 1958 and urges that a second conference be held in 1962 or at as early a date as is practicable in order to evaluate progress in air pollution control programs, nationally, since the first conference."

Mr. Chairman, I also want to include with my statement the attached draft of a bill, prepared by the American Municipal Association, for your committee's consideration and study in connection with the problem of air pollution control.

In closing, let me again say how very much we appreciate your coming to Alabama and the time you are devoting to collecting the viewpoints and expressions of local people on the very important subject you are studying.

A BILL To improve the public health by encouraging cooperative activities on the part of State and local governments for the prevention and control of air pollution; to carry out and promote research into the causes and prevention of air pollution; to make grants-in-aid to State and local governments for improving and extending programs of the prevention and control of air pollution; and for other purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Federal Air Pollution Control Assistance Act of 1962".*

#### DECLARATION OF POLICY

SEC. 2. In recognition of the dangers from air pollution to the public health and welfare, injury to agricultural crops and livestock, damage to and the deterioration of property, and the hazards to air and ground transportation, it is hereby declared to be the policy of Congress to recognize and preserve the primary responsibilities and rights of the States and local governments in preventing and controlling air pollution, to support and aid research relating to the prevention and control of air pollution, and to provide Federal technical assistance and services and financial aid to State and local governments and to interstate and interlocal agencies in connection with the prevention and control of air pollution. To this end, the Surgeon General of the Public Health Service shall administer this Act through the Public Health Service and under the supervision and direction of the Secretary of Health, Education, and Welfare.

#### INTERSTATE COOPERATION

SEC. 3. (a) The Surgeon General shall encourage cooperative activities by the States and local governments for the prevention and control of air pollution; encourage the enactment of improved and, so far as practicable in the light of varying conditions and needs, uniform State and local laws relating to the prevention and control of air pollution; and encourage compacts between States for the prevention and control of air pollution.

(b) The consent of Congress is hereby given to two or more States to negotiate and enter into agreements or compacts, not in conflict with any law or treaty of the United States, for (1) cooperative effort and mutual assistance for the prevention and control of air pollution and the enforcement of their respective laws relating thereto, and (2) the establishment of such agencies, joint or otherwise, as they may deem desirable for making effective such agreements and compacts. No such agreement or compact shall be binding or obligatory upon any State a party thereto unless and until it has been approved by the Congress.

#### RESEARCH, INVESTIGATIONS, TRAINING, AND INFORMATION

SEC. 4. (a) The Surgeon General shall conduct in the Public Health Service and encourage, cooperate with, and provide technical services and financial assistance to other appropriate public (whether Federal, State, interstate, municipal or intermunicipal) authorities, agencies, and institutions, private agencies and institutions, and individuals in the conduct of and promote the coordination of research, investigations, experiments, training, demonstrations, surveys and studies relating to the causes, effects, extent, prevention and control of air pollution. In carrying out the foregoing, the Surgeon General is authorized to—

(1) collect and make available, through publications and other appropriate means, the results of and other information as to research, investigations, surveys, studies and demonstrations relating to the prevention and control of air pollution, including appropriate recommendations in connection therewith.

(2) make grants-in-aid to public or private agencies and institutions, organizations and individuals for research, demonstration, survey and study projects and provide for the conduct of research, demonstrations, surveys and studies by contract with public or private agencies and institutions and individuals without regard to sections 3648 and 3709 of the Revised Statutes.

(3) provide training for, and make grants-in-aid to public and private institutions for new or improved programs for training of, qualified technical and professional persons in the prevention and control of air pollution.

(4) make training grants to qualified individuals at the graduate level and to establish and maintain research fellowships in the Public Health Service and at approved public and private educational institutions and nonprofit research organizations, with such stipends and allowances, including traveling and subsistence expenses, as he may deem necessary to encourage and procure the assistance of the most promising research fellows.

(b) The Surgeon General may conduct investigations and research and make surveys and studies concerning any specific problem of air pollution confronting any State, or local government air pollution control agency and make such recommendations as may be appropriate for the prevention or control of such pollution if requested to do so by such State or local government air pollution control agency, or, if, in his judgment, such problem may affect or be of concern to communities in various parts of the nation or may affect any community or communities in a State other than that in which the matter causing or contributing to the pollution originated.

(c) The Surgeon General shall, in cooperation with other Federal, State and local agencies having related responsibilities, collect and disseminate basic data on chemical, physical, biological and other characteristics of air quality and other information insofar as such data or information relates to air pollution and the prevention and control thereof.

#### GRANTS FOR AIR POLLUTION CONTROL PROGRAMS

SEC. 5(a) From the sums available for the purposes of this section the Surgeon General shall make grants-in-aid to State, interstate, local and interlocal air pollution control agencies for approved projects for the formulation, development, improvement and extension of programs for the prevention and control of air pollution in such amounts and upon such terms and conditions as the Surgeon General may determine.

(b) Sums appropriated for such grants-in-aid shall remain available until expended.

#### MEASURES ON PROBLEMS OF AIR POLLUTION

SEC. 6(a) Whenever the basis of reports, surveys or studies, he believes it appropriate or whenever requested by any State, interstate agency or by any local or interlocal government air pollution control agency, the Surgeon General may call a conference on any problem of air pollution which may affect or be of concern to various communities in various parts of the nation or which may affect any community or communities in any State other than the State in which the matter causing or contributing to the pollution originates.

(b) Notification of such conference shall be given to the State or States and the interstate, local or interlocal agencies concerned, and to such other persons as the Surgeon General may deem appropriate.

(c) Following this conference the Surgeon General shall prepare and forward to all the air pollution control agencies attending the conference a summary of the conference discussions including (1) the existence, extent, cause and effect of the air pollution on which the conference was held, (2) progress toward its abatement and (3) recommendations for the abatement of such air pollution.

(d) If such remedial action is not taken, or action reasonably calculated to secure abatement of such pollution is not taken within the recommended time, the Surgeon General may call a public hearing on the problem of such pollution. Any such hearing shall be conducted before a board composed of not less than five members, appointed by the Secretary of Health, Education, and Welfare who shall be representative of the public, industry which is affected or concerned with the problem, persons who are expert or have special knowledge of the matter, interested Federal agencies and interested State or local government air pollution control agencies.

(e) Subject to regulations of the Surgeon General an opportunity to be heard at such hearing shall be accorded to all interested persons.

(f) After consideration of the information presented at the hearing and such other information as is available to it, the board shall make a report and recommendations to the Surgeon General on such matters as the existence, cause and effect of the air pollution on which the hearing was held, progress toward its abatement, and other related matters. Such report and recommendations, together with the comments and recommendations, if any, of the Surgeon General with respect thereto, shall be made available to the community or communities, Government agencies, and industries concerned and, to the extent the Surgeon General deems appropriate, to the public.

(g) The members of the board who are not officers and employees of the United States, while attending meetings of the board shall be entitled to receive compensation at a rate to be fixed by the Secretary of Health, Education, and Welfare but not exceeding \$50 per diem, including travel time, and while away from their homes or regular places of business they may be allowed travel expenses, including per diem in lieu of subsistence as authorized by law for persons in the Government service employed intermittently.

(h) Such clerical assistance as may be necessary to discharge the duties of the board shall be provided by the Surgeon General.

#### COOPERATION BY FEDERAL AGENCIES

SEC. 7. It is hereby declared to be the intent of Congress that any Federal department or agency having jurisdiction over any building, installation or other property shall, to the extent practicable and consistent with the interests of the United States and within any available appropriations, cooperate with the Department of Health, Education, and Welfare and with any interstate agency or any State or local or interlocal government air pollution control agency in preventing or controlling the pollution of the air in any area insofar as the discharge of any matter from or by such property may cause or contribute to pollution of the air in such area.

#### ADMINISTRATION

SEC. 8. (a) The Surgeon General is authorized to prescribe such regulations as are necessary to carry out his functions under this Act. All regulations of the Surgeon General under this Act shall be subject to the approval of the Secretary of Health, Education, and Welfare. The Surgeon General may delegate to any officer or employee of the Public Health Service such of his powers and duties under this Act, except the making of regulations, as he may deem necessary or expedient.

(b) The Secretary of Health, Education, and Welfare, with the consent of the head of any other agency of the United States, may utilize such officers and employees of such agency as may be found necessary to assist in carrying out the purposes of this Act.

(c) There are hereby authorized to be appropriated to the Department of Health, Education, and Welfare such sums as may be necessary to enable it to carry out its functions under this Act.

#### DEFINITIONS

SEC. 9. When used in this Act—

(a) The term "State air pollution control agency" means the State health authority, except that in the case of any State in which there is a single State agency other than the State health authority charged with the responsibility for enforcing State laws relating to the abatement of air pollution, it means such other State agency.

(b) The term "interstate agency" means an agency of two or more States established by or pursuant to an agreement or compact approved by the Congress, or any other agency of two or more States, having substantial powers or duties pertaining to the control of air pollution.

(c) The term "local government air pollution control agency" means a city, county or other local government health authority, except that in the case of any city, county or other local government in which there is a single agency other than the health authority charged with responsibility for enforcing ordinances or laws relating to the abatement of air pollution, it means such other agency.

(d) The term "interlocal government air pollution control agency" means an agency of two or more local governments created by or pursuant to State law and having substantial powers or duties pertaining to the control of air pollution.

(e) The term "State" means a State or the District of Columbia.

## OTHER AUTHORITY NOT AFFECTED

SEC. 10. Nothing contained in this Act shall limit the authority of any department or agency of the United States to conduct or make grants-in-aid or contracts for research and experiments relating to air pollution under the authority of any other law.

SEC. 11. This Act shall not be construed as superseding or limiting the functions, under any other law, of the Surgeon General of the Public Health Service.

SEC. 12. The following statutes or parts of statutes are hereby repealed: 69 Stat. 322, Chapt. 360, as amended.

**STATEMENT OF MRS. HUGH SPURLOCK, THIRD DISTRICT,  
FEDERATED WOMEN'S CLUBS**

Mrs. SPURLOCK. I would like to explain the presence of one woman, I believe, at this meeting. I am here in the interest of the Alabama Federation of Women's Clubs. My particular job is conservation of our natural resources in the third district which, of course, involves all of Jefferson County. The clubwomen have had meetings. We have heard from our health department. We have kept up with the progress of these hearings you have heard this morning. First, on our program in the conservation of our resources is our protection of our waters. The pollution of our waters, and second is pollution of our air. We do not think one takes any precedent over the other. We are interested in good clean water and good clean air. They are our God-given resources. They are not ours to pollute. I think we have heard the evidence this morning that conditions have reached the point whereby something has to be done. I want to compliment this committee, and I am very appreciative of presenting myself here this morning because the clubwomen are definitely interested in what you are doing. We are watching what you are doing, and we are keeping up with what you are doing. We want you to know that we stand ready to work with you on this program. We are particularly appreciative of Dr. Branscomb's report and the report that has come here from Dr. Prindle. We are appreciative of the hearing, and just remember that we can't live without pure water and we cannot live without pure air. It behooves us to do something about it.

Mr. ROBERTS. Thank you, Mrs. Spurlock, I certainly appreciate that, I am delighted that you made that statement.

Anyone else who would like to make a statement to the subcommittee?

**STATEMENT OF K. W. GRIMLEY, EXECUTIVE SECRETARY, ALA-  
BAMA TUBERCULOSIS ASSOCIATION**

Mr. GRIMLEY. My name is Grimley, executive secretary of the Alabama Tuberculosis Association, which is a component part of the National Tuberculosis Association. I would like to call your attention to the fact that about 2 months ago the National Tuberculosis Association for the first time took official action directed toward the Congress on a matter not concerned directly with tuberculosis per se. And to call your attention to the fact that the National Tuberculosis Association did urge that the \$5 million in ceiling on annual appropriations for the air pollution program be removed, and that the authority for this program be continued indefinitely.

Mr. ROBERTS. Thank you, Mr. Grimley. The committee appreciates your statement and the fine work you have been doing for a long, long time in this field. We are very grateful to you.

Mr. ROBERTS. The Chair would like to express his appreciation to the citizens of Birmingham, Congressman Huddleston, the chamber of commerce, to the Jefferson County Health Department, Dr. Gallalee, and Dr. O'Brien and all others who helped us in holding what I think will be a very fine hearing, will be of great benefit to this committee and its work in this important field.

We are grateful for the opportunity to be in Birmingham. I want to express again my sincere thanks to the members of the subcommittee for coming from such long distances to be with us and thank them for their taking time out of a busy schedule to come here.

If there are no further statements from the members of the subcommittee or others, this will conclude the hearing, and the subcommittee will stand adjourned.

I would like to say this, that if any of you would like to come to meet the gentlemen who are here, members of the subcommittee, I am sure they will be glad to know Birmingham people.

(Whereupon, at 1:55 p.m., the hearing was adjourned subject to the call of the Chair.)

